

POWELL FOREST

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M. W. GORMELY

1931

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FOREST SURVEYS DIVISION
VICTORIA, B. C.

POWELL FOREST

SURVEY & PRELIMINARY MANAGEMENT RECOMMENDATIONS

M. W. Gormely

1931.

Accompanying this report:

Forest Survey No. R. 27
Survey file No. 0105222.
Administration file
No. 080724.

Forest and topographic map in
four sections, scale 40 chains
to the inch.
Same; reduced scale 2 miles to
the inch.

INDEX MAP POWELL FOREST



- Scale - 31.56 Miles to 1 Inch -

POWELL FOREST

The Powell Lake drainage, and adjacent areas topographically suited to administration as a Provincial Forest, were examined in 1930 for the purpose of determining the value and the boundaries of the proposed Forest, and forest conditions within the boundaries.

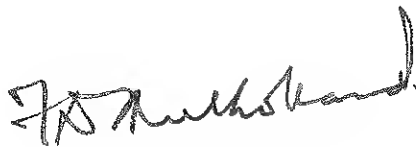
This area has produced fine stands of timber and has been the scene of some of the largest operations on the coast. The slash has been persistently burned, in some cases several times in successive years, and the productive quality of the soil reduced thereby. Over 40,000 acres are not reproducing satisfactorily and may require planting. From the standing timber left and the young stands established, the Forest could produce a sustained yield of 42 million board feet annually, though present prices will not permit this utilization. After planting and regulation this annual yield could be increased to over 50 million feet.

*SAF.
Accompanied by
Total 44,000 acres*

The area recommended as a Provincial Forest is 680 square miles and excludes tracts suitable for agricultural development. A soil survey was made by K.F. Moffatt in conjunction with the forest survey and his report is attached.

The owners of private timber assisted us with estimates of their holdings which were used in this report after checking in the field, assistance was also given by the district rangers, whose local knowledge saved much fresh field work.

The report and maps are based on conditions as in the spring of 1931.



Forester.

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THE POWELL FORESTSYNOPSISGeneral Location:

The Powell Forest covers the following watersheds:
Powell Lake, Haslam Lake, Gordon Pasha Lakes and Hotham
Sound, in the New Westminster and Range 1, Coast, Districts.

Area within recommended boundary:

680 square miles

(a) Vacant Crown land.....	383,375 acres
(b) Timber Licences.....	40,650 "
(c) Crown Grants & Pre-emptions..	10,635 "

Classification of areas (in acres)

Merchantable timber -

(a) Accessible.....	79,030 acres
(b) Inaccessible.....	4,030 "
Total.....	83,060 acres

Immature timber - (access)

(a) 1 - 20 year age-class	25,390 acres
(b) 21 - 40 " " "	22,120 "
(c) 41 - 60 " " "	8,150 "
(d) 61 - 80 " " "	200 "
Total.....	55,860 "

Forest Land unsatisfactorily stocked: (Access)

(a) Logged and burned.....	42,260 acres
(b) Non-commercial cover.....	3,390 "
Total.....	45,650 "

Total Productive Forest Land.....	184,570 "
Non-productive, alpine, swamp, etc.....	250,090 "

Total Area of Forest..... 434,660 "

Summary of sustained annual yield:

Rotation 100 years.	
Present accessible productive capacity	42,470 M.B.M.
Ultimate productive capacity.....	50,330 M.B.M.
Present utilization.....	5,000 M.B.M.

Total 44,000 M.B.M.

ESTIMATE OF MERCHANTABLE TIMBER - M.B.M.

Species	Accessible			Inaccessible			Total			Additional Salvageable shingle bolts (corde)		
	Crown	Licences	Total	Crown	Licences	Total	Crown	Licences	Total	Crown	T.Lie	Total
Western red cedar	322,580	597,650	920,230	32,390	1,350	33,740	354,960	599,000	953,960	143,000	22,000	165,000
Douglas fir	255,730	475,040	730,770	14,850	510	15,360	270,580	475,550	746,130			
Western hemlock	363,280	312,300	675,580	56,240	840	57,080	419,520	313,140	732,660			
Balsam (silver fir)	135,090	152,110	287,200	37,450	680	38,130	172,540	152,790	325,330			
Yellow cedar (cypress)	53,200	25,840	79,040	7,690		7,690	60,890	25,840	86,730			
Sitka spruce	14,840	7,730	22,570				14,840	7,730	22,570			
Western white pine	5,510	3,350	8,860	160		160	5,670	3,350	9,020			
Total M.B.M.	1,150,230	1,574,020	2,724,250	148,780	3,380	152,160	1,299,000	1,577,400	2,876,400	143,000	22,000	165,000
% of total volume	40.0	54.7	94.7	5.2	.1	5.3	45.2	54.8	100			
Area (acres)	38,580	40,450	79,030	3,830	200	4,030	42,410	40,650	83,060			
% of mature area	46.5	48.7	95.2	4.6	.2	4.8	51.1	48.9	100			

Logging since survey
See new estimate.

DESCRIPTION OF AREA

Boundaries and general topography

The south boundary follows Jervis Inlet and agricultural land adjacent to the highway from Thunder Bay to Powell River; for the rest the Forest boundary follows the height of land around watersheds previously mentioned. The Forest lies in very mountainous country for the most part. Steep, narrow valleys with numerous lakes are included. Powell Lake, about 30 miles in extreme length, is the principal topographic feature. Streams draining the area are shallow and fast flowing.

An extensive comparatively level area exists from Haslam Lake south and west to Malaspina Straits and Thunder Bay.

Climate:

The Forest enjoys the moderate south coast climate. Along the south boundary of the Forest from Powell River to Jervis Inlet precipitation averages 36.27 inches annually, while at Goat Lake it is 65.93 inches. The average temperature at Powell River is 50°F. These averages cover a period of 15 years.

Industries:

Agriculture: There are several settlements near the town of Powell River which produce vegetables, fruit and dairy products. None of these areas are large, as the available farm land in this vicinity is not extensive. The town provides an adequate market for all the farm and dairy products produced. A good automobile road connects Powell River with Lund on the north and Thunder Bay on the south.

Westview; a suburb of Powell River, has a population of about 1000. Most of the inhabitants are connected with the pulp and paper industry but a few small farms and dairies have been established here. Connected by stage and telephone to Powell River, U.S.S. boats stop at the Government wharf here on request.

Myrtle Point: a small farming district containing about twenty settlers. Formerly headquarters camp of the Bloedel, Stuart and Welch Logging Company.

Lang Bay: a small farming district with about 50 or 60 settlers. Formerly headquarters camp of Brooks,



Looking N.E. into Giovanni Valley - small farms raising vegetables, sheep and goats. Surrounding country badly burned. Fire damaged timber logged for shingle bolts. Patches of reproduction and scattered seed trees typical of Compartment 12.

Bidlake and Whittall Logging Company. U.S.S. boats stop regularly at Government wharf.

Stillwater: a small farming district with about 30 settlers. Formerly headquarters camp of Brooks, Scanlon and O'Brien Logging Company. At present it is the base of operations for the Lois River power project. The powerhouse is being built here. U.S.S. boats call regularly at the old company wharf.

Olsen's Landing: a small farming settlement on Powell Lake composed of seven families. No regular connections with Powell River.

Giovanno Valley: a small farming settlement of three families, entirely within the forest. Situated between Giovanno and Powell Lakes. No regular communication with Powell River.

Powell River, Westview, Lang Bay and Stillwater have post offices.

Mining: There is one small mine, the Romano Mine, in operation on Goat Island. It is a copper mine of little importance. Several prospect holes have been made in various parts of the country but few claims have been staked. There seems to be little possibility of development in this industry, as the area has been fairly thoroughly prospected.

Trapping: Trap lines are operated in the Eldred River and Horseshoe River valleys, also along the ridge east of Freda Creek and the ridge west of Hotham Sound. Powell and Daniels Rivers have been trapped for many years but at present nothing is being done here. Mink, martin, weasel, otter and beaver are to be found.

Recreation: Hunting is popular in this district although somewhat restricted of late years due to the disappearance of the big game. Bear, cougar, deer and mountain goat formerly plentiful are now very scarce. Goat Island has been created a game reserve. Fishing is excellent in all waters both in and around the forest.

Recreation and Summer Resorts: There are two summer resorts on Powell Lake. Both are situated near good fishing areas. Powell River, with its fine hotel, attracts a large number of vacationists. From here boating, on both Powell Lake and Malaspina Straits, and motoring are very popular. Also there is a fine bathing beach.

Hydro-electric Power Development: The Lois River power project includes the raising of the elevation of Lois Lake

about 100 feet by means of a large concrete dam on Lois River. At present a temporary log-crib dam 100 feet high has been completed and will raise the level of the lake 50 feet. The water is diverted from the dam into a pipe line running through a tunnel cut in solid rock for a distance of one mile; thence to an open surge tower and finally to the turbines in the power house at Stillwater, developing about 22,000 horse power. The permanent dam will double the developed power which is carried over land lines to the pulp and paper mills at Powell River.



Temporary log-crib dam - Lois River.

DESCRIPTION OF FORESTForest Species:

Common name	Botanical name	% of total volume of merchant- able timber
Western red cedar	<i>Thuja plicata</i>	33.1
Douglas fir	<i>Pseudotsuga taxifolia</i>	26.0
Western hemlock	<i>Tsugo heterophylla</i>	25.5
Silver fir (balsam)	<i>Abies grandis</i>)	11.3
	<i>Abies amabilis</i>)	
Yellow cedar(cypress)	<i>Chamaecyparis nootkatensis</i>	3.0
Sitka spruce	<i>Picea sitchensis</i>	.8
Western white pine	<i>Pinus monticola</i>	.3

Forest types:

The general forest type is a mixture of fir, cedar and hemlock. Other species, silver fir (balsam), yellow cedar, pine and spruce attain dominant proportions over small areas. As a rule, in the mature timber hemlock, silver fir and cedar form the valley bottom type, while fir, cedar and hemlock form the slope type. On the higher slopes just under scrub line hemlock, silver fir, yellow cedar becomes the prevalent type. There are few pure stands in the forest and most of these are due to a burn which killed all but the most rugged trees, such as the thick-barked fir. "Pure" stands have been defined as including 70% or more of the main species and any species included in a type name provides 20% or more of the total volume of mature timber or of the stocking of immature.

Reproduction:

The immature stands are all mixed fir - cedar - hemlock in varying proportions. There are few pure stands in the forest. 13% of the total area is covered with young growth satisfactorily restocking, of this 85% is under 40 years old.

The 1-20 year age-class is well distributed over the area and has generally resulted from logging operations.

The 21-40 year age-class is well scattered over the forest also but has generally resulted from old burns. In most cases the logging in these areas has been after the original burn, this, however, has not affected the reproduction seriously.

94% of the 41-60 year age-class is in one stand

in the Horseshoe River valley. The rest is near Freil Lake. These stands result from old timber burns.

The 61-80 year age-class occupies an insignificant area near Gordon Pasha Lake. It is overstocked and on a poor site. This area has been classed as 41-60 year old in future yield estimation.

Although in many cases fir forms a very small portion of the immature stands, it may be expected that it will provide a much larger proportional volume of mature timber than any of the other species. This is because of the comparatively low mortality of fir in young stands.

Site quality:

No attempt has been made to differentiate between stands on sites of various quality in the estimate of future yield in this Forest, as no accurate figures are available for these mixed stands. For descriptive purposes a differentiation into five site qualities has been attempted, based on general observation combined with height-age measurements, namely, poor, fair, medium, good, excellent. It was found that on a medium site the height in feet of dominant trees is approximately equal to the age in years.

Forest land not satisfactorily stocked:

Areas containing less than the minimum number of trees per acre indicated below, for the various age classes, are considered as not satisfactorily stocked.

<u>Age-class</u>	1-10 years	11-20 years	21-30 years	31-40 years	41-50 years	51-60 years	61-80 years
Trees per acre	1000	750	550	425	350	275	200

On this basis 42,260 acres were found to be understocked, as compared with 55,860 acres of satisfactorily stocked young growth. Much of this will require artificial reforestation to produce stands of commercial value. Successive burns after logging are responsible for the failure of natural reforestation.

Non-commercial cover:

The areas so classified are productive forest sites whose present cover is of no commercial value, alder, willow, maple, wild cherry, dogwood, etc. or conifers formerly of merchantable quality but so decayed by disease or

insects as to be useless.

Deciduous cover almost invariably contains a number of young conifers growing up in the shade of the broadleaf trees. It is expected that these conifers and their progeny will ultimately succeed in reforesting the areas.

An effective burn through the decadent coniferous cover would open the area for reproduction. This should be done in conjunction with neighbouring slash burns and wherever the decadent stand is well isolated from good timber and reproduction. If the decadent area is sufficiently open to allow restocking, or if reproduction is already coming in satisfactorily no burning should be done.

Infestation:

Insect infestation is about normal in this Forest. There are no obvious epidemics. Bark beetles are noticeable in hemlock over quite a few areas - silver fir is also somewhat affected in the same areas. The cedar borer is active in some areas - notably near Hotham Sound. Leaf-eaters, on the needles of fir reproduction, were observed in the vicinity of Powell Lake but to no great extent.

FOREST UTILIZATION

Present utilization:

A few small operations are active in the vicinity of Powell Lake, notably at Chippewa Bay and on Goat Island. A small pole operation is active at Baker Bay in Hotham Sound. All of the above are power operations. A horse-logging operation on Gordon Pasha Lake is logging shingle bolts, poles and piling, also cutting that timber which is to be flooded by the dam on Lois River. Several shingle bolt operations are active along the shores of Powell and Goat Lakes. Most of these are hand logging operations but there are two horse and flume shows and one motor truck show. The Chippewa Bay operation is the largest in the forest and employs twelve men cutting about 15 M.B.M. per day. It is a pole-rail-road operation, large-flanged log oars are pulled by a gasoline locomotive over peeled poles to an incline where a snubbing machine lowers them to the log dump on the Lake. The other operations are very small. The total present utilization is about 5,000 M.B.M. per year.

There is a small sawmill at Powell River. It is a well-equipped, up-to-date mill employing about twenty men cutting about 20 M.B.M. per day and drawing its supplies from the Powell Lake logging operations. The major product of this mill is yellow cedar lumber. Nearby is a shingle mill which also gets its material from Powell Lake operations. It cuts about 120 M. shingles per day. Vancouver and Powell River are the major markets for the products of these mills. The Gordon Pasha Lake and Hotham Sound operators ship their products directly to Vancouver. The present utilization may be increased about eight times without exceeding the calculated present accessible productive capacity of the Forest. The best and most accessible timber has been logged by two or three large operations which were completed three or four years ago.

Utilization recommendations:

Most of the timber in the forest is available for utilization during the next few years as it is both mature and accessible. Certain areas, being in a further state of decay or in danger of having their best outlet cut off, may be assigned for more immediate utilization. Compartment 27, an example of the former case, should be logged immediately, especially the south part of it which is most accessible and most seriously decayed. Compartment 10 should be logged before the steel is further removed from the old

Eagle River and Northern Railroad and before the permanent dam is built on Lois River disrupting the outlet. Furthermore, the south-west portion of this area has been badly burned and decay is rapidly becoming a serious factor.

Utilization problems:

The best and most accessible blocks of timber are alienated and will be logged only at the owner's convenience. This alienation of the best blocks of timber is one of the main difficulties in the way of complete utilization in the forest. The licence-holders who, as has been proven in former cases, are willing to log the best portions of their own limits only, certainly will be reluctant to remove the less accessible, and usually poorer, Crown timber. Of course, the present price of logs, together with the high cost of logging large blocks, is a tremendous factor against complete utilization. In order to make even a small profit, operators are forced to remove only the best and most accessible timber as quickly as possible.

Booming facilities, harbours and surrounding waters:

Booming facilities are quite adequate in all waters both within and surrounding the forest. There are several fine harbours along the shores of Malaspina Straits and all of these are excellent booming grounds. Powell River, Westview, Myrtle Point, Lang Bay and Stillwater all have fine harbours which have been used as booming grounds by operators in this district. The Powell River harbour is exceptionally good having, besides a fine Government wharf, an excellent private wharf capable of docking several deep-sea vessels as well as the various large passenger vessels which call at this port. Other excellent booming grounds adjacent to the forest are Thunder Bay, Saltery Bay, St. Vincent Bay, Baker Bay and Goliath Bay. Several other small bays along the sea coast could be used to advantage for small booming grounds. On Powell Lake, Chippewa Bay is the best booming ground but there are many other well-protected bays that might be used for this purpose. Booming on Gordon Pasha and Lois Lakes has been carried on effectively for many years.

The surrounding waters are Malaspina Straits, Jervis Inlet and Hotham Sound. All of these waters are navigable to deep-sea vessels at all times. A very dependable towing service is enjoyed between this district and the various log markets.

MANAGEMENT RECOMMENDATIONS

Main objects of management:

Good management in this forest will be extremely difficult until the large area of alienated timberland (49% of the timbered area) has reverted to the Crown. A management plan based on sustained yield is not practicable as yet. However, the main objects of management at the present time are:

1. To judiciously regulate the cut of Crown timber so that, as far as possible, only salvage cuttings and thinnings be made except when economic operation requires that operators in alienated timber should be allowed to cut such Crown timber as is tributary to their operations.
2. Adequate and systematic fire protection throughout the forest.
3. Artificial reforestation of the large understocked area as soon as possible after the fire risk has been sufficiently reduced.

Yield:

The capacity for sustained annual yield is based on a rotation of 100 years. This rotation was deduced from yield estimates supplied by J.L.Alexander and represents the approximate economic rotation from a commercial volume production standpoint. An average yield of 27,270 f.b.m. per acre is estimated at 100 years old, this being equivalent to a mean annual increment of 272.7 f.b.m. per acre.

The accessible, stocked, forest area is as follows:-

Type	Area (acres)	Estimated mature volume (f.b.m.)	Years cut
Accessible mature timber	79,000	2,724,000,000	64
41-60 years old	8,300	226,341,000	5
21-40 " "	22,100	602,667,000	14
1-20 " "	25,400	692,658,000	17
Totals	134,800	4,245,666,000	100

Using Hanzlik's formula, $Y = \frac{Vm}{r} + I$

where Y = sustained annual yield
 Vm = present accessible volume
 r = rotation - 100 years
 I = mean annual increment on immature areas .

The Forest can produce an accessible sustained annual yield of $\frac{2,724,000,000}{100} \div 272.7 \times 55,860 = 42,470,000$ f.b.m.

Determination of ultimate productive capacity:

Total productive area in forest = 184,570 acres.

Mean annual increment based on a 100-year rotation =
 272.7 f.b.m. per acre.

Ultimate sustained annual yield = $184,570 \times 272.7$
 = 50,330,000 f.b.m.

Silvicultural treatment:

Method of cutting: Clear-cutting has been the universal method throughout this Forest. It has been believed to be the only economical method possible under prevailing conditions. The large virgin timber necessitates large, powerful, expensive machinery. The heavy damage to trees of small diameter (usually hemlock) results in a heavy accumulation of small logs and debris, and few living trees remain on the area. Repeated slash fires in this Forest have been so intense as not only to destroy or severely damage any trees left on the ground, but also to reduce the site quality materially.

It is maintained that trees smaller than 20" d.b.h. cannot be logged profitably and the determination of both present and ultimate sustained yield was made on a basis of utilization to this minimum diameter. It is possible, however, that selective logging, with relogging of smaller material may in the future both increase the average volume per acre logged and improve natural reforestation. Experiments in selective logging now being conducted on the Pacific Coast may be expected, if successful, to affect logging practice here.

Apart from selective logging, reforestation would be improved if clear cutting could be done in groups, settings being separated by green timber from each other so that the logged area may have a chance to seed in before

the intermediate settings are logged.

Slash disposal:

Slash disposal has been by broadcast burning. This is the prevailing method on the coast. Too often, however, these fires have become uncontrollable and have burned timber and young growth coming in after a previous burn. This state of affairs is primarily responsible for the presence of 42,300 acres of not satisfactorily restocking land. Slash should be burned during the first season after logging, in the spring or fall when weather conditions permit both good burning and good control and should be planned with due regard for all natural or artificial fire-breaks such as rivers, railroad grades, etc. Next to protecting mature timber it is most important to prevent subsequent burns in all restocking areas.

Reforestation:

A large proportion of the 42,300 acres of not satisfactorily restocked land is suitable for artificial reforestation. Some of the area will slowly restock naturally.

Due to the badly burned condition of the soil, the area to be artificially restocked should be planted rather than seeded. The planting of fir and white pine is very desirable. Both of these species thrive in the open and both are very valuable species. White pine blister rust is practically unknown in this locality so that the pine plantations should be quite successful.



Lot 913 - looking S. from vicinity of Duck Lake. Logged and burned - not restocking satisfactorily - heavy ground cover - fireweed, fern, etc. Note lack of seed trees.

PROTECTION RECOMMENDATIONS

Fire damage in the last 10 years:

During the last ten years about 87,000 acres were burned over. A large portion of this area was either slash burned or reburned. The soil on a major portion of the reburned areas is in very poor condition. The heaviest fire year was 1922 when approximately 50% of the total area was either burned or reburned. The succeeding years of 1923, 1924 and 1925 were also bad fire years. During these 4 years burns amounted to about 95% of the total area burned in the past 10 years. During this time two of the largest logging companies on the coast were operating in this district as were several other smaller operations. Since the cessation of these operations the burns have been negligible.

Protection plan:

The Powell Forest is under the direction of the Campbell River Supervisor District. During the fire season an organized and effective fire patrol is maintained by launch in the Powell Lake and Jervis Inlet-Hotham Sound watersheds by the Powell River and Sechelt Ranger Stations respectively. The Powell River - Thunder Bay road, with its local branch roads, provides for excellent patrol by car of the south portion of the forest. A car may be run to Haslam Lake via Cranberry Lake but, while private row boats and launches are to be found on Haslam Lake, there is no Forest Branch boat for patrol purposes. There are two lookouts adjacent to this forest - a Forest Branch lookout on Texada Island overlooks the flat south portion of the Powell Forest while a private lookout west of the dam on Powell River overlooks lower Powell Lake and Inland Lake and is in direct communication with the Powell River Ranger Station. This lookout is maintained by the Powell River Company.

However, there is a large portion of the forest, especially in the north and north-east, that is insufficiently protected. Further protection in the form of a few well-situated lookouts would be very advantageous. Recommended sites are as follows:

1. Unnamed mountain, 3900' elevation, north-east of the head of Haslam Lake.
2. Unnamed mountain, 5000' " immediately north of Siwash Creek.
3. Unnamed mountain, 2500' " " east of Horseshoe Lake.
4. Unnamed ridge, 3000' " " south-east of Khartoum Lake.

The object in view, on recommending these sites, is to protect the remaining mature timber, most of which is very inadequate-

ly patrolled due to the lack of both men and money for protection purposes in this district. Because of the mountainous nature of this country aeroplane patrol would be the most efficient and all private and commercial aviators operating in this district should be urgently requested to report any fires to the ranger at Powell River or Sechelt.

Trails and railroad grades:

There are many trails in the forest, cruiser's, trapper's and hunter's trails, but few, if any, of these trails are kept open for protection purposes. One or two trapper's trails are roughly cut out now and again by the trappers but not sufficiently for quick, easy travel over them. The most important trails and railroad grades are as follows: Powell-Daniels watershed trail runs north along the west side of Powell River and a branch follows the west side of Daniels River. A poor trail made and used by trappers but has been neglected. Could easily be made into a good foot trail at comparatively small expense. The trail runs through a fine, well-timbered area.

Eldred River trail: runs north from Goat Lake along the west side of the river to the first main forks. This trail is well cut out for about two miles from the lake, beyond this it is roughly cleared by the trapper who made it. It is recognizable for some distance along each fork but is a poor trail here. Very little expense would make it a first-class foot trail.

Freda Creek trail: runs north from Gordon Pasha Lake to Freda Creek; thence along the east side of the creek to Freda Lake. This trail was recently cut out by a cruising party and is in fine condition as far as the first lake. Another trail runs along the west side of the creek from Horseshoe River to the first lake. This is a recent trail and is in fair condition. It runs through a large area of windfall and is not a good trail to preserve.

A trapper's trail runs from Horseshoe River along the south side of Freda Creek until it crosses the main Freda Creek trail then it goes in an easterly direction to the top of the adjacent ridge. It runs along this ridge in a northerly direction to a point west of S.T.L. 2008. This trail is kept roughly clear by the trapper but is of little importance from a protection standpoint.

Power line trail: the power line and its maintenance trail from Stillwater to Powell River is very recent and well cut. It runs through compartment 6 and may be useful for protection purposes.

Several short skidroad and fire line trails are to be found in the forest but are of minor importance for forest protection purposes.

Main line of the Brooks, Scanlon and O'Brien Logging Company: runs north from Stillwater through Horse-shoe River valley to Dodd Lake. All but the first 4 miles to the Lois River dam is abandoned. The High-Line Spur runs from Nanton Lake north-west to Lewis Lake. The Scanlon Creek branch is entirely separate from the main system. This grade runs from Gordon Pasha Lake along both sides of Scanlon Creek. All these grades are in good condition and will be very useful for protection purposes.

Main line of the Bloedel, Stuart and Welch Logging Company: runs north from Myrtle Point to Duck Lake; thence east deep into Lot 913. A spur goes north to Haslam Lake. All grades are in good condition. Entire system abandoned.

Main line of Brooks, Bidlake and Wittall Logging Company: runs north-west from Lang Bay to a short distance south of Duck Lake. Entirely abandoned. This grade is badly overgrown with alder saplings in some places but it could be cleared easily and cheaply, if considered necessary for protection purposes. Many old spurs run east through Lot 913 but these are in poor condition.

An old telegraph trail branches from the main line grade at the north boundary of Lot 5500 and runs west around the south end of Hammil Lake to a local road about a mile beyond.

Main line of the Goliath Bay Logging Company: runs north from Goliath Bay to Freil Lake. Grade abandoned but in good condition.

Recommendations for improved protection:

1. That main trails, as mentioned above, be cut out as well as is necessary, especially those in the remaining timber areas.
2. That such trails (also main railroad grades as above) be periodically inspected and kept in proper condition.
3. That a lookout system, as suggested above, be introduced or that more adequate patrol be made in the vicinity of the remaining timber.
4. That, when planning outlets for future logging operations, routes through well established stands of second growth be avoided as far as possible.

5. That rowboats, suitable for use with outboard motors, be kept on the following lakes: Haslam, Horseshoe, Dodd and Khartoum, in addition to the one now kept on Lois Lake.

6. That a patrolman be stationed at Lois Lake during the fire season to cover the Horseshoe River valley and Gordon Pasha Lakes watershed and that proper communication be maintained between him and the ranger station at Powell River.

APPENDIX 1.

1. The first of the two
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3. The third of the two
4. The fourth of the two
5. The fifth of the two
6. The sixth of the two
7. The seventh of the two
8. The eighth of the two
9. The ninth of the two
10. The tenth of the two



Looking E. across Inland Lake - Mature
timber Compartment 2.

1. Description of Individual Compartments.

Compartment 1, Sub.A, fir - cedar - hemlock, 1914.

Partly logged by high lead, A-frame and hand-logging for saw-timber 15 to 20 years ago. Burned, in common with the greater part of the area adjacent to Powell Lake, about 30 years ago. Site quality generally poor but patches of medium site quality are to be found throughout the area. Seed trees are plentiful and generally well scattered and, as the stocking is quite satisfactory, timber sales could be made in portions of the south half of the area which contain 3 to 5 M.B.M. per acre, fir - hemlock - cedar, provided contract conditions protect the young stand from unnecessary damage in logging and slash burning. The former stand varied from about 5 M.B.M. per acre on poor sites to 50 M.B.M. on a few patches of good site. The topography is badly broken by rock outcrop, bluffs and slides over most of the area.

A logging operation in Compartment 17 Sub A takes its timber out to the lake over a pole railroad through the north end of this compartment, part of which it has recently logged.

Compartment 1, Sub.B, hemlock - cedar - fir, 1915.

This area is similar to Compartment 1 except that it has been logged by ground lead and fore and aft roads. These roads are badly deteriorated and will be of no value to a future operation. Seed trees are very scattered and of no commercial value - largely poor hemlock - cedar. Site quality good.

Compartment 1, Sub.C, fir - hemlock - cedar, 1914.

Very similar to Compartment 1, Sub B, but the main fore and aft logging road is used as a trail to Inland Lake and is kept open. Site quality fair. Former stand 25 M.B.M. per acre, fir - cedar.

Compartment 2, mature fir.

The timber is of poor grade owing to the large degree of decadence and fire damage prevalent in the stand. However, it is quite accessible and will probably be logged in the near future. The area west of Inland Lake is very broken rocky country and of poor site quality while the area east and south of the Lake is smoother and a good site. However, it is in the latter area that the damage is most prevalent. A considerable portion of the fire-killed cedar may be salvaged for shingle bolts but the bulk of timber is saw log material as is typical of this forest.

Compartment 2A, non-commercial cover.

Decadent and fire-killed timber of little or no merchantable value. The area lies south and west of Compartment 2. The site is of medium quality and the area quite accessible.

Compartment 3, Sub.A, non-productive.

A barren and scrub area. Barren area in the north part of the area largely due to severe burn about 1900 which exposed a large area of mineral soil and rock.

Compartment 3, Sub B, non-productive.

Exactly similar to Compartment 3, Sub. A.

Compartment 3, Sub. C, non-productive.

Similar to Compartment 3, Sub. A.

Compartment 3, Sub. D, non-productive.

The area is entirely burned over by severe 1900 burn but a scrub site was typed out in the south end of the compartment.

Compartment 4, Sub. A, mature cedar - fir.

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The timber is of low grade, largely due to poor site. The country is steep and broken with shallow soil and frequent rock outcrop and bluffs. A burn in 1924 destroyed most of the timber in the south-west corner of the area. The compartment is only a fair logging chance. Old logging railroad grades reach up to the south boundary and are in good repair at the present time. Area should have been logged in conjunction with railroad operations.

Compartment 4, Sub.B, mature cedar - hemlock.

The timber is of good size and grade. The country is fairly smooth making a good logging chance. A branch of an adjacent logging railroad has been projected through the area but never constructed. The timber is less accessible than that of Compartment 4, Sub. A as the outlet is longer and more difficult. Area should have been logged in conjunction with adjacent railroad operation. An alternate outlet is via Haslam Lake to Myrtle Point or Westview - making use of old railroad grades or present roads.



Abandoned logging camp.
 Lot 913 - looking N.E. from vicinity of Duck
 Lake - Logged and burned - heavy ground cover -
 no reproduction. Compartment 6. Timber in
 Compartment 4 Sub A in background.

Compartment 5, hemlock - cedar - fir, 1924.

Large part of area logged and burned about 5 years ago - high lead and handlogging methods used. A railroad operation tapped the north and south ends of the compartment. Handlogged along steep parts of lake shore. The site quality in general is good. The main type is made up of several separate sub-areas. Former stand ran about 40 M.B.M. per acre, fir - cedar. Seed trees at the south end of the lake would make a small timber sale running about 25 M.B.M. per acre, - cedar - fir - hemlock. The topography is varied - abrupt and broken along sides of lake and fairly low and smooth at ends of lake. Logging chance medium.

Compartment 5A, logged or burned 1924.

A sub-compartment consisting of several sub-areas of not satisfactorily restocking fir - cedar - hemlock. North-west areas badly burned in 1900 and again in 1924. Sub-areas which were logged have been left with practically no seed trees and the slash burn has injured the soil in many cases. However, in general there are seed trees sufficiently close to ensure sufficient restocking in time. Some shingle bolts are to be had at the north end of the lake.

Compartment 5B, fir - hemlock - cedar, 1895.

A sub-compartment consisting of several sub-areas burned about 35 or 40 years ago. These areas are part of an original larger burn but escaped the 1924 fire. Seed trees are widely scattered or in small patches but of no merchantable value. Site quality varies from poor to medium - areas are on higher levels where soil is generally shallow.

Compartment 6, logged or burned, 1921.

Area cleanly logged and burned 3 to 15 years ago. Except for occasional patches of scrub or decadent timber there are no seed trees on the area. The site quality was originally excellent but the soil seems to have been damaged to some extent over most of the area. However, the site is still good. Ground cover is still quite sparse. Two railroad operations have been conducted in this area and their grades cover most of the compartment, many of which are in good condition. A good trail runs between the main line grades and another between the westerly main line grade and an old spur of the Eagle River and Northern Railroad. The main road to Powell River runs adjacent to the south boundary of the compartment. The power line (and its maintenance trail) from Stillwater to Powell River runs through the south end of the compartment. An area of about 2000

acres in the centre of the compartment has been cut out of the forest as it has agricultural possibilities.

Compartment 6A, fir - hemlock - cedar, 1921.

This sub-compartment consists of several separate sub-areas generally near decadent scrub or other timber considered unmerchantable by the logging operators. The seed trees are usually in patches and the restocked areas surrounding them. The site quality varies from good to excellent. Former stand varied from 40 to 50 M.B.M. per acre - fir - cedar - hemlock.

Compartment 6B, non-commercial cover.

Decadent timber mentioned in Compartment 6A.

Compartment 7, logged or burned.

Logged and burned 3 to 5 years ago. This was a railroad operation and high lead was used exclusively. Large portion of area reburned 2 or 3 times after logging. Bad burns in 1922, 1925 and 1926. Most of area burned clean - practically no seed trees and reproduction is very slow to restock. Soil has been badly burned over a large area. However, good ground cover is springing up and will soon provide humus. The lack of seed trees is the most serious factor affecting the future restocking of the area. The site quality was originally one of the best in the forest and comparable to the best on the coast. The burns may have reduced the site quality somewhat but it is still regarded as excellent. Former stand ran from 50 to over 100 M.B.M. per acre - fir - cedar. Parts of this stand are said to have run as high as 300 M.B.M. per acre. The topography is generally smooth except near Dodd and Windsor Lakes where bluffs, slides and ravines are prevalent. Many railroad grades, all in good condition, cover the area. The main line, called the Eagle River and Northern Railroad, ran from Dodd Lake to Stillwater - the last 4 miles of which are still being operated over during construction of the Lois Lake dam. A large volume of shingle bolts are to be had from several burned but unlogged areas. The logging chance is good.

Compartment 7A, hemlock - cedar - fir, 1924.

A sub-compartment consisting of several long strips of type around the border of the compartment - close to standing timber. These areas were logged or burned with the main operation but the presence of seed trees has provided very satisfactory stocking. Site quality good but, due to generally higher elevation, not equal to that of Compartment 7. Also the logging chance is generally poorer. Soil damage is negligible in this type being on the edge of the burns.

Compartment 7B, hemlock - fir - cedar, 1899.

A sub-compartment consisting of several areas of type, due to an old burn, that escaped the more recent fires. Areas are in the northern part of compartment and are separated by the more inaccessible parts of Compartment 7. The site quality is only medium but the stocking is very satisfactory. Seed trees are very frequent and scattered. Topography is generally broken - rock bluffs and slides are noticeable. Logging chance poor - accessibility of some areas questionable - long haul of 20 to 30 miles to tide water. Possible outlet via Goat and Powell Lakes, for the most northerly areas. Former stand from 20 to 60 M.B.M. per acre - fir - cedar - hemlock. A few small sub-typees of 60 year second growth have been included. These are on poor sites, are somewhat inaccessible and are insufficient for a logging chance by themselves.

Compartment 8, fir - hemlock - cedar, 1878.

Area badly burned about 80 years ago and reproduction came in slowly becoming established satisfactorily about 50 years ago. A considerable mixture of 61 to 80 years second growth is present and this shows a remarkably fine merchantable volume even after cedar poles and fir - hemlock piling has been cut out. In untouched portions of the compartment this old second growth runs over 50 M.B.M. per acre. The site quality of this type is said to be one of the best in the country and is similar to that of Compartment 7 as it was before the repeated burns. The stand appears to be particularly healthy. Most of the area has been cut over for poles, piling and shingle bolts so that further thinnings need not be contemplated for some time. It is unfortunate that the very best portions of this fine stand are to be ruined by the flooding of the Gordon Pasha Lakes under the Lois River water-power project. A large portion of this compartment will be flooded eventually when the permanent dam is built. The temporary dam just constructed will flood some of the area. The old grade of the Eagle River and Northern Railroad from Compartment 7 runs through this area - also a few spur-line grades have been made here for the removal of bolts, poles, etc.

There is a small horse logging operation in this area, logging bolts, poles and piling which are towed to the end of Lois Lake then loaded on cars and taken to the sea at Stillwater over the operating portion of the Eagle River and Northern Railroad. Several settlers have cleared small farms in this area and, of these, only one may be considered as a bona fide settler. The others left when the adjacent logging operation ceased or when the water-power company bought their land. It has been decided to throw these Crown granted areas into the forest as it is expected that they will revert to the



Looking N. across Lois Lake - logged and burned.
Satisfactorily restocking with hemlock, cedar, fir
12 years old. Compartment 9. 50 year-old second
growth of Compartment 8 in right background.

The photograph shows a landscape view across Lois Lake. In the foreground, there are several tall, thin trees, possibly hemlock or cedar, standing against a backdrop of a forested hillside. The sky is overcast and hazy. The overall scene depicts a logged and burned area being restocked with trees. The text below the photograph describes the restocking process and the growth of the trees.

There is a small house located on the left side of the photograph. The house is surrounded by trees and is situated on a small island or peninsula. The text below the photograph describes the restocking process and the growth of the trees.

Crown in time.

Compartment 9, hemlock - cedar - fir, 1918.

Logged and burned 3 to 20 years ago - ground lead and high lead systems used in logging. Site quality varies from medium to good. Former stand runs from 30 to 60 M.B.M. per acre - fir - cedar - hemlock. The topography is steep and broken in parts but generally is quite smooth - the steep, rough country adjacent has not been logged. This area is well stocked - some areas being overstocked. A small volume of shingle bolts is to be had. Seed trees are generally few and well scattered but nearby timber has aided in restocking the area. Fore and aft pole roads and chutes are to be found representing the old ground lead logging. A railroad grade along Scanlon Creek is in good condition - it was part of the Eagle River and Northern Railroad system, the remaining portion of which runs through Compartment 9. The main road to Powell River runs adjacent to the south boundary.

Compartment 9A, logged or burned, 1922.

A sub-compartment consisting of several sub-areas logged and burned simultaneously with main type of the compartment. Those sub-areas in the south part of the compartment have been repeatedly burned and the soil is very dry, some of it appears to be seriously damaged. An area in Scanlon Creek valley has not been slash-burned but has been clean-out and is not restocking satisfactorily. The soil was shallow and was badly dug-up in logging. However, it is a narrow valley and is encircled with timber so that it may be expected to restock soon. The site quality of the sub-compartment is medium to good. Former stand 40 to 80 M.B.M. per acre - fir - cedar - hemlock.

Compartment 9B, fir - hemlock - cedar, 1887.

A sub-compartment at the north end of the Compartment 9. Burned about 35 years. It is now satisfactorily stocked. The site quality is medium. Former stand ran from 30 to 60 M.B.M. per acre - fir - cedar. Topography steep but not too rough. A medium logging chance. North of Gordon Pasha Lake a fringe of alder along the shore has hindered the reproduction but the conifers are gradually springing up in the shade and will choke out the non-commercial cover in time. A small sub-type of 65 year mixed second growth is included. This area has been cut over for poles and bolts.

Compartment 9C, hemlock - cedar - fir, 1855.

A small sub-compartment west of Scanlon Creek which was burned about 75 years ago. Apparently the burn injured the soil and site quality. Old snags indicate that the former stand was average, running 30 to 40 M.B.M. per acre - fir - cedar. The present stand is heavily stocked but the height and volume growth is poor. The soil is shallow and rock outcrop is noticeable. Whereas thinning out some of the 2000 suppressed trees per acre, (under 3" d.b.h.) from the stand would doubtless improve it, the area is somewhat inaccessible and a poor logging chance, and the value of the resultant product would be comparatively small, even under intensive management. The rotation age had best be extended.

Compartment 9D, non-commercial cover.

A sub-compartment of deciduous cover, mostly alder, willow and maple, as mentioned in Compartment 9B.

Compartment 10, mature cedar - fir - hemlock.

The timber is high grade and of good size. The topography is fairly smooth especially on the lower slopes of the valley. The timber is in one compact unit and makes an excellent logging chance. It is a good railroad proposition although there is a 10-mile haul to saltwater at Stillwater or a 15-mile haul to Lang Bay. The most economical way of removing the timber was via the old logging railroad which tapped Compartment 7. However, the grades are still in good condition and may yet be made use of. This area should be logged as a unit but the bulk of the timber is owned by two or three private companies and satisfactory arrangements may not easily be made. Defect is prevalent in the stand but no more so than in the average overmature virgin stands on the coast. A fire in 1925 destroyed a sizeable area west of Freda Creek - but a large volume might be salvaged if logged soon. The inaccessible timber is entirely on Crown land and is poor quality hemlock - silver fir (balsam). Defect is serious over this area so that utilization is doubtful.

A good trapper's trail runs from Horseshoe Valley to the top of the ridge east of Freda Creek - along this ridge to a point west of S.T.L. 2008. Another well cut trail runs from Gordon Pasha Lake along Freda Creek to Freda Lake. The last three miles have not been cut out for some years and therefore will not be as good as the rest of the trail.

Compartment 10A, burned 1925.

A sub-compartment west of Freda Creek, burned 5 years ago. The fire left little or no salvageable timber but the soil appears to be undamaged. Reproduction was slow in starting but there is plentiful 1 and 2 year mixed reproduction showing and doubtless will become established satisfactorily in a year or two. The site is good. Former stand ran 60 to 80 M.B.M. per acre - fir - cedar. Very few seed trees remain on the area but there are sufficient nearby to ensure satisfactory restocking. Heavy ground cover and debris in places but not so much as to hinder good restocking. Disease and insects noticeable but as yet not serious.

Compartment 11, Sub.A, fir - cedar - hemlock, 1908.

Burned about 22 years ago. Seed trees scattered over the area and in one or two groups sufficiently large for small timber sales. Reproduction is satisfactorily established so that with proper care, these sales may well be made. Area is quite accessible as it faces Powell Lake. Topography, though steep, is not badly broken. Soil has not been seriously damaged by the fire. The site quality is fair. Former stand ran about 25 M.B.M. per acre - the timber was small. The area would make a good logging chance for an A-frame operation, swinging the logs into the lake.

Compartment 11, Sub B, fir - cedar - hemlock, 1899.

Similar to Compartment 11, Sub.A, but separated from it by part of Compartment 12. The area was burned about 30 years ago. There are no seed trees on the area - the few left after the fire have been logged off. The stocking is light, but sufficient. Shingle bolts have been removed from the area. Bolt chutes are numerous throughout the area but are mostly worn out, decayed or torn down. One or two good skidroads are to be found also. The site is of medium to good quality. Topography is fairly smooth. Soil is good and fairly deep. Former stand ran from 40 to 70 M.B.M. per acre - large fir and good cedar stumps are prevalent over the area. The type lies along the lake shore and is an excellent logging chance.

Compartment 12, burned or logged, 1925.

Area burned 30 years ago and again 5 years ago. These burns, together with intermediate burns in 1922 and 1924, have seriously injured the soil over large areas. With the exception of two small sub-areas the compartment is seriously understocked. Seed trees are very scarce and very scattered - not nearly sufficient for proper restocking. Former stand ran 20 to 50 M.B.M. per acre - fir - cedar - hemlock. Present site quality may be considered to be fair. Topography varies from smooth to fairly broken - generally smooth enough for a fair logging chance. Subtypes of satisfactorily stocked reproduction are too small to be

The soil appears to be waterlogged. The vegetation was almost
 starting but there is a small area of 15 year old reproduction
 immediately adjacent to the burned area. The area is very
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Looking E. on Goat Lake. - burned, logged and reburned -
 patches of 15 year old reproduction and alder - very few
 seed trees. Compartment 13B.

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logged by themselves. A fair volume of bolts are left on the south-east part of the area. Part logged subsequent to burns. The area is well bolted - two good flumes and skidroads on north part of compartment.

Compartment 13, fir - cedar - hemlock, 1909.

Burned about 25 years ago and part burned about 6 years ago. The compartment consists of several sub-areas, one of which has been logged about 15 years ago by ground lead. Area well stocked and seed trees are very scarce except in that area west of the south end of Goat Lake where seed trees are plentiful and an area of mature timber is nearby. These seed trees may well be logged together with the mature timber if due care is given the reproduction. Shingle bolting is now being done immediately north of S.T.L.2792P. Several bolt chutes have been constructed here. Site quality over the several areas is medium. Former stand ran 40 to 60 M.B.M. per acre - cedar - fir - hemlock. Good cedar and fir on the lower slopes. Topography quite broken in some areas but fairly smooth as a whole - a medium to good logging chance. Accessibility is good as all areas are close to Goat Lake.

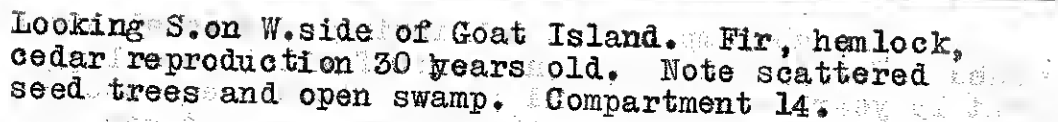
Compartment 13A, hemlock - cedar - fir, 1886.

A sub-compartment consisting of several areas burned about 35 years ago and some of which were logged about 15 years ago by ground lead. These areas escaped subsequent burns and are well stocked. Seed trees are few and scattered. A small volume of bolts may be had. Site quality over the several areas averages medium. Former stand ran 50 to 60 M.B.M. per acre - cedar - fir - hemlock. Most areas are quite accessible and constitute a good logging chance.

Compartment 13B, burned and logged, 1914.

Burned and part logged about 15 years ago. Ground lead yarding used. Area probably reburned about 5 years ago. There are few seed trees on the area. Reproduction is very scarce. Soil on areas near the lake is in fair condition, some humus being left on the ground. At higher elevations much mineral soil has been exposed but seed trees are scattered over this area satisfactorily. On the area as a whole good restocking is not to be expected for some time. The site quality, on the whole, is fair. Former stand ran 30 to 60 M.B.M. per acre - cedar - fir - hemlock. Logging chance varies from medium to good.

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...and open swamp. Compartment 14, ...
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ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

Compartment 130, mature fir - cedar.

A sub-compartment of timber. This area has been subjected to a ground fire but little damage was done. The timber is of good size and grade. It is in one compact area and constitutes a fine logging chance. Outlet via Goat and Powell Lakes to mills at Powell River.

Compartment 14, fir - hemlock - cedar, 1902.

Burned about 30 years ago. Less damaged areas logged since then, especially for bolts by horse-logging and flume. Ground lead with fore and aft roads and chutes were used for getting out logs. Some hand logging was done along the lake shore. In general seed trees are very scarce except on the south end of the island. The main type is made up of 3 areas, each of which is well stocked. The site quality varies from medium to good. Former stand ran 30 to 80 M.B.M. per acre - fir - cedar - hemlock. The topography is very varied, some areas being smooth with an easy slope while others, often adjacent, being steep and rough. On the whole, this island constitutes a good logging chance. There is a good volume of bolts on the area and a bolting operation is in progress at present. This burn was heavy and has damaged the soil quite seriously in some areas. The site quality is fair, over the whole area. Very few seed trees are to be found but good restocking may be expected when the 30 year reproduction, now sparsely scattered over the area, begins to produce seed. Former stand ran about 25 M.B.M. per acre - fir - cedar - hemlock.

Compartment 14^B, mature fir.

A sub-compartment of timber at the south end of the island in one compact area. The timber is of fair size and grade but is defective due to ground fire which burned most of the area. Beetles and fungus have made entry into the timber. However, it is now being logged. The soil is shallow, especially on the higher slopes, and the fire has exposed considerable rock and mineral soil. Regarded as a poor to fair site. Topography is not badly broken but a few rock slides, boulders and ravines reduce an otherwise good logging chance to a medium one. Logs are towed to mills at Powell River, a distance of about 10 miles.

Compartment 15, fir - hemlock - cedar, 1899.

Burned some 30 years ago and subsequently part logged. Burn had little effect on lower slope but higher slopes with shallow soil suffered severely in most cases. Site quality ranges from medium to good. The area is well-stocked and seed trees are scattered throughout. The topography is fairly smooth but generally steep. Rock outcrops

Site 14A
Burned
1900

and slides on the upper slopes mar an otherwise good logging chance. Leaf-eaters were found to be active on the young firs in certain areas. Both chutes and skidroads in good condition are to be found in the compartment.

Compartment 15A, fir - cedar - hemlock, 1923.

A small sub-compartment logged and burned about 6 years ago. The young reproduction, on a good site, is well stocked. There are no seed trees on the area. Former stand 50 M.B.M. per acre - fir - cedar. Good logging chance as topography is smooth.

Compartment 15B, burned and logged, 1899.

Sub-compartment composed of several sub-areas, all burned about 30 years ago. One sub-area in the south end of the compartment was badly damaged by the fire as the soil was shallow. The site quality, over the whole sub-compartment, is fair. The former stand ran from 20 to 50 M.B.M. per acre. There are practically no seed trees. Most of the area has been bolted. The topography is varied in this type. In the north the sub-areas are steep and fairly rough but other areas farther south are fairly smooth. A medium logging chance.

Compartment 15C, mature fir - cedar.

A sub-compartment containing exceptionally good timber. The area is small and adjoins timber tributary to Theodosia River valley.

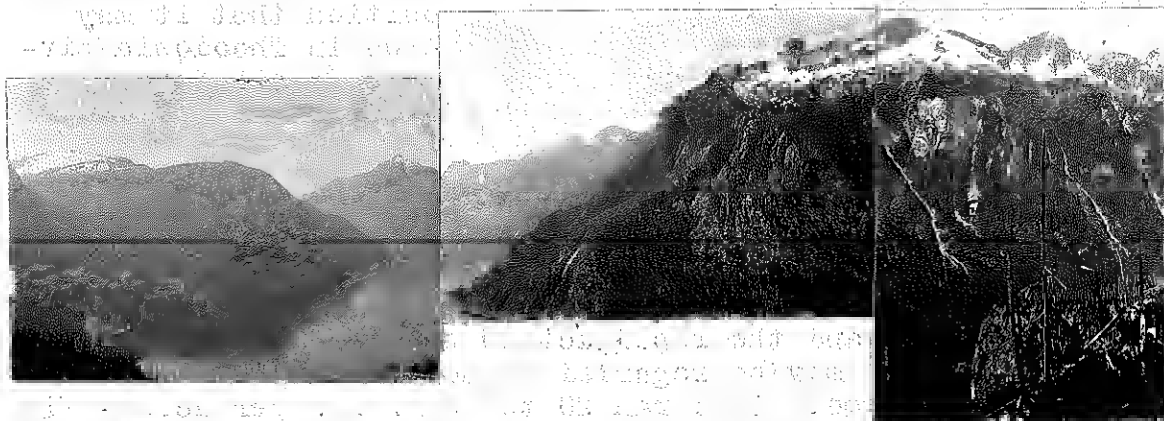
This area is in a steep sharp valley and is not easily loggable by itself. The western end of this type has been subject to heavy wind-fall but the down timber is still good. The timber is in such a position that it may go out with the railroad logging operation in Theodosia River valley or may be logged separately into Powell Lake.

Compartment 16, cedar - fir - hemlock, 1909.

This type is composed of several sub-areas. It is due to a burn about 30 years ago. As the soil is shallow on this area the burn had a retarding effect on the reproduction, also very few seed trees were left. However, the area is well stocked and the reproduction shows very good growth. The site quality may be regarded as medium to good over the whole area. Former stand ran 20 to 30 M.B.M. per acre - fir - cedar. Most of the area has been bolted and one or two operations are in progress here now. The topography is quite rough and steep - rock bluffs, slides and outcrop are prevalent but type runs close to lake. A medium logging chance. Some hand logging possible along the lake shore. Bear Tooth



Looking E. from E. end Goat Island - Note Alpine type, severe burn exposing rock, scattered 20 year old reproduction and satisfactorily restocked cedar, fir, hemlock, 20 years old along the shore. Illustrative of Compartment 20, 16B and 16 respectively.



Looking S. from head of Powell Lake - Note narrow valleys and steep rugged country - Shallow swift flowing streams.

Creek provides a good logging chance - a good skidroad and log-chute are to be found here. There are bolt-chutes throughout the area but most of these are worn out or torn up.

Compartment 16A, hemlock - cedar - fir, 1900.

A sub-compartment consisting of two sub-areas burned about 35 years ago. Subsequently part logged for bolts. The site quality is good and the area is well stocked. There are very few seed trees to be found. Former stand ran 30 to 50 M.B.M. per acre - cedar - fir - hemlock. Topography varies from smooth and flat to badly broken and steep. About 1/5 of the north sub-area is almost inaccessible - the rest is very smooth. Logging chance medium to good.

Compartment 16B, burned or logged, 1895.

A sub-compartment made up of several sub-areas, all burned about 35 years ago. Subsequently part-logged for bolts. Site quality is medium. Lack of reproduction due to lack of seed trees. Both sides of the north end of Powell Lake have been very badly burned by this fire - only two valley types being left undamaged north of Goat Island. Evidently the soil was shallow in this area as great sections of bare rock are now to be seen covered with large snags which indicate that these areas were formerly productive. All the productive areas left are along the lake shore and provide a good logging chance, although in many places the topography is steep and badly broken.

Compartment 17, Sub.A, mature hemlock - silver fir (balsam).

Timber is of fair size and grade but not heavy. A logging operation is being conducted in the area at present. Yellow cedar is the most valuable species and there is a good volume of it in the stand - fir and red cedar are being cut to some extent also. The stand is on a high and moderately steep valley. The logs are lowered on large-flanged log cars to the lake over a pole-railroad incline. A fast-flowing creek rushes down a steep, sharp watercourse through the valley. The sharp sides of the creek-bed develop into canyons in places and these are serious obstacles to logging. On the whole this is a medium logging chance. Under the system of logging now in use the entire area is accessible. The timber goes to the operator's mill at Powell River, about 9 miles away.

Compartment 17, Sub.B, mature hemlock - silver fir (balsam).

This timber is of good size and grade and is quite heavy, especially in the valley bottom. The majority of the stand is of saw-timber size but, because of species, will

probably be logged for pulp timber. The topography is fairly broken and quite steep - also there is a sharp drop to the lake. The logging chance is regarded as poor. However, a good volume of yellow cedar is to be had, thus making the area profitable to log. Timber will come out via Olsen valley to the lake and thence, a distance of about 16 miles, to Powell River.

Compartment 17, Sub.C, mature cedar - hemlock.

Timber is large and of good grade. Stand is quite heavy but defect is prevalent especially in cypress, hemlock and silver fir (balsam). Dead and down cedar will provide good bolts and quite a volume is to be had in the north-west corner of the area. A small area to the south of the main body is practically inaccessible but there is a possibility of logging it through a low divide at the south-west corner of the compartment. The valley is steep and there is a sharp drop to the lake and although the topography is fairly smooth, the logging chance is only fair. The logs must be towed about 29 miles to Powell River.

Compartment 17, Sub.D, mature cedar.

Timber is large and of good grade. Stand is heavy especially near the forks of the creek. Cedar, fir and spruce predominate on the lower levels and hemlock, silver fir (balsam) and cedar on the upper slopes. The valley is flat but with steep sides and there is a sharp drop to the lake. The country is fairly smooth although the occasional rock outcrop and ravine are to be seen. On the whole, it is a good logging chance but there is a 30-mile tow for the logs to Powell River. The north fork of the creek is strewn with enormous boulders and the timber is of very poor quality here, making this a truly non-merchantable, inaccessible stand.

Compartment 18, mature cedar - hemlock.

The timber is large and of good grade. The stand is not heavily stocked. The cedar is particularly large and of fine quality but is badly butt-rotted. Also a large part of it grows on steep broken hillsides so that breakage in logging probably will be high. The spruce and silver fir (balsam) in this area are so much alike in the bole that it is very difficult to distinguish between them. Hemlock, spruce and silver fir (balsam) form the valley bottom type while cedar, fir and hemlock form the sidehill type. The topography is steep and broken on the upper slopes and flat and smooth on the valley bottom. At the upper reaches of both Powell River and Daniels River valleys, occasional boulders are found and slides often extend almost to the river from the narrow, steep sidehills. This compartment



Looking W. from Powell Lake about 4 miles North of
Goat Island. Bare rock bluffs down to waters edge -
effect of severe burn. Compartment 20.



Headwaters of Eldred River - 13 miles up river
from head of Goat Lake. Near N. limit of timber
in Compartment 22 - timber in foreground.

will make a good railroad logging chance as an easy grade can be found for about 12 miles up Powell River valley and about 8 miles up Daniels River valley. Logs must be towed a distance of 35 miles to Powell River. There is good volume of timber on the higher inaccessible slopes. An old and very poor trapper's trail runs from the lake up both valleys.

Compartment 18A, fir - cedar - hemlock, 1909.

A sub-compartment comprising several sub-areas all the result of burns apparently about 20 years old. These areas have all been reported by reconnaissance - no examination was made. Areas observed seemed to be well stocked.

Compartment 19, water.

Comprising Powell and Goat Lakes and some small areas frequently flooded by fluctuations in the elevations of these lakes.

Compartment 20, non-productive.

A large area of alpine, scrub and barren extending from Powell Lake to Hotham Sound.

Compartment 21, Sub. A, barren.

Due to bad burn. Large volume of shingle bolts may be had from this area.

Compartment 21, Sub.B, barren.

Due to bad burn. Some bolt-timber left on the area.

Compartment 22, mature hemlock - cedar.

The timber is of medium size and grade. The cedar and fir on the upper slopes are of good quality and size. The topography is typical of the U-shaped valleys on the coast. Steep sidehills, often quite smooth but with occasional rock outcrop and slides, and flat valley bottoms. The north end of the west-fork valley contains quite a volume of yellow cedar.

This area is a good railroad logging chance. An easy grade can be found as far north as the second main forks - a heavier grade would be necessary to get to the third forks. Beyond this it would hardly be economical to build a grade. This means that about 9 to 10 miles of easy grade may be had and possibly 3 miles of heavier grade. The logs will have to be towed a distance of 24 miles to Powell River. Some of the timber of the upper reaches of several tributary creeks is of doubtful accessibility. This timber is generally hemlock silver fir (balsam) with some red and yellow cedar. A trapper's

trail runs from the lake to the first main forks. This trail evidently branches and follows each fork for some distance but here the trail is very poor and hard to follow.

Compartment 23, Sub.A, mature hemlock - silver fir (balsam).

The timber is of medium size and grade but the stand is quite heavy. However, decay is prevalent in the stand, especially butt-rot and centre-rot, some top-rot and conk also noticed. The south end of this area is quite seriously affected and if not logged soon it will become too decadent for merchantability. This valley is narrow, steep but not badly broken on the east side, where the timber is, but the country between the timber and the lake is badly broken and steep. The logging chance is regarded as fair. There are no trails or roads in the area. The logs must be towed a distance of 23 miles to Powell River.

Compartment 23, Sub.B, mature hemlock - silver fir (balsam) - cedar.

Very similar in all respects to Compartment 23 Sub.A. The timber runs from the main valley to a smaller valley to the east where the country is steeper and hard to log.

The sharp drop of 1500 feet from the timber to the lake is somewhat broken but a chute about $3/4$ of a mile long would take the logs over the steepest part, from there the timber could easily be skidded to the lake. The logs must then be towed about 20 miles to Powell River. As the defect in the stand is becoming serious, this area should be logged as soon as possible. A fair logging chance.

Compartment 24, water.

Comprising Lois, Gordon Pasha and Khartoum Lakes. There is a water power project in the course of construction in this area. A concrete dam, 200 feet high, is to be built with the intention of raising the water level of all three lakes to an elevation of about 100 feet above the present level of Lois Lake. This will entail the flooding of some 4000 acres of land, both private and Crown, and will make one large lake. When this is accomplished (within the next 10 years, it is expected) the present area of this water compartment will be more than doubled. The merchantable timber on the proposed flooded area is being logged off.

Compartment 25, mature fir - cedar - hemlock.

This compartment being long and narrow covered a wide range of sites. The timber varies from small, sub-scrub, light stands to exceptionally large, heavy stands. Timber varying from 14 to 107 M.B.M. per acre was cruised in

the more accessible timber close to the lake. The logging chance, as a whole, is fair. The timber may go out via Gordon Pasha and Lois Lakes to the railroad at Lois River until the permanent dam is built, obstructing the railroad. An alternative route through Scanlon Creek valley, where old railroad grades are still in good condition, and over a low divide to St. Vincent Bay. However, this would entail a large distance of adverse grade and probably would be the less economical of the two routes.

Compartment 26, Sub.A, mature cedar - hemlock.

The timber is of large size and excellent quality - particularly the fir, cedar and spruce. The other species are of average size and quality. The decay is only the normal amount to be expected in over-mature stands. This area is particularly well situated in regard to safety from fire or windfall. The deep narrow valley protects the stand from wind while a former fire has burned bare areas large enough to safely separate this stand from its neighbours. Hemlock, silver fir (balsam) and cedar form the valley-bottom type while cedar, fir and hemlock form the slope type. Cedar reaches its best development on the intermediate slopes. The topography is very uniform, steep sidehills and low, flat valley bottoms. An easy railroad grade may be found from the lake to the most northerly of the timber limits. Outlet via Khartoum, Gordon Pasha and Lois Lake, thence by railroad to Stillwater. An alternative route is over a low divide at the head of Khartoum Lake to Hotham Sound. Altogether this area would make a good logging chance.

Compartment 26, Sub. B, mature cedar - hemlock.

The timber is similar to that in Compartment 26, Sub. A. an old burn (about 75 years ago) partly destroyed the south half of S.T.L.2004. The area is now well stocked with vigorous 75-year second growth, some of which is of merchantable size. A horse-logging operation is being conducted in this area now removing bolts, poles and piling. The topography is much steeper than in Compartment 26, Sub.A. The valley bottom grade is much too steep for a railroad. Could probably best be logged by skyline and swing system or by fore and aft pole roads. Outlet via Gordon Pasha Lake to Stillwater. Only a fair logging chance.

Compartment 26, Sub.C, mature cedar - fir.

The timber is similar to that in Compartment 26, Sub.A. The topography is somewhat similar to that in Compartment 26, Sub.B, but even more steep and broken. A fair logging chance.

Compartment 27, mature fir.

Timber generally of fair size and grade but a good

volume of poles and piling may be obtained from timber at the higher elevations. A ground fire has damaged that part of the compartment facing Jervis Inlet. In this area a good volume of shingle bolts may be obtained. The defect in the stand, especially in the burned area, is somewhat greater than average. Butt-rot, conk and cat-face defects are most prominent. The fire-damaged area should be logged soon as it is rapidly losing value, due to this decay. The topography is quite steep over most of the area and somewhat broken by bluffs, slides and small ravines. However, the timber is quite accessible, especially on the southern part of the area near Jervis Inlet. That part of the timber lying east of Lois Lake might best go out via Lois Lake to Stillwater or it may go with the rest of the timber to Jervis Inlet. High-lead, with fore and after pole roads and chutes, seems to be the best method of logging the area although tractors and chutes have been used successfully on similar steep slopes nearby. On the whole it is a medium logging chance. All Crown timber should be taken out together with the nearest alienated timber.

Compartment 28, non-productive.

Scrub, barren and water. Non-productive due to site and elevation. Part of barren area caused by severe fire.

Compartment 29, non-productive.

A scrub compartment due to site and elevation.

Compartment 30, logged or burned, 1924.

Burned and part logged and burned from 2 to 30 years ago. Different sections of the area have been subject to several fires. There have been 5 fires, in different places, over the compartment since 1900. Seed trees are few but well scattered. The reproduction is gradually coming back. The soil is not seriously damaged but some areas, where it is shallow, have been badly dug-up by tractor logging and some mineral soil was exposed. On the whole the site quality is medium. Former stand ran about 40 to 50 M.B.M. per acre - fir - cedar - hemlock. Some of the chutes used in the tractor logging operation in this area are still in good condition and may be used in taking out adjacent mature timber. A few good skidroads and fore and aft roads are to be found also. Logging chance is good.

Compartment 30A, hemlock - cedar - fir, 1925.

A sub-compartment composed of several small sub-areas burned or logged 5 to 20 years ago. Ground-lead, high-lead and tractor logging have been done on the compartment. 20-year reproduction on the eastern part of the compartment shows medium growth. Seedlings, 1 to 5 years old, in the western part of the compartment shows medium growth also. Seed trees are few but well scattered. Former stand ran 40 to 70 M.B.M. per acre - fir - cedar - hemlock. Site quality is medium. The topography, especially in the eastern part of the compartment, is badly broken by small rock bluffs and outcrops. However, the area is very close to Jervis Inlet and is considered to be a good logging chance.

Compartment 30B, hemlock - fir - cedar, 1905.

Burned and part-logged by ground lead 20 years ago. Seed trees are plentiful but the timber is hardly good enough to warrant timber sales in the area. The soil is good and the reproduction shows average growth. Former stand ran 40 to 60 M.B.M. per acre - fir - cedar - hemlock. The site quality is medium. This area was left unburned by frequent fires over adjacent areas.

Compartment 31, fir - cedar - hemlock, 1898.

Ground-lead and horse-logged and part-burned about 30 to 40 years ago. Seed trees sufficiently numerous and well scattered over the area. The area is well stocked. Former stand ran 20 to 50 M.B.M. per acre - fir - cedar - hemlock. Site quality varies from fair to medium. Topography varies from smooth and moderately steep to abrupt and badly broken by outcrop, bluffs and slides. However, the area is very accessible. A few skidroads, pole roads and chutes are to be found but are in poor condition for the most part. The area as a whole is a good logging chance. A good volume of shingle bolts is available.

Compartment 31A, hemlock - cedar - fir, 1920.

A sub-compartment made up of 3 sub-areas. Logged and burned 5 to 20 years ago. Seed trees plentiful and well scattered. Site quality fair. Former stand 20 to 50 M.B.M. per acre - fir - cedar - hemlock. Topography generally flat and smooth but occasionally broken by rock bluffs and outcrops. On the whole the logging chance is good.

Compartment 31B, logged and burned 1924.

A sub-compartment consisting of several sub-areas. Logged and burned about six years ago. Seed trees are satisfactorily scattered over the area but the reproduction is slow to come in. Apparently the soil was somewhat damaged

by fire as it is quite shallow in these areas. Former stand ran 20 to 40 M.B.M. per acre - fir - cedar - hemlock. The site quality is fair. The topography is typical of the compartment. One or two skidroads, in fair condition, are to be found on the areas.

Compartment 31C, mature fir - hemlock.

Timber small but fairly sound. Conk and butt-rot are the most noticeable defects. The topography is steep and broken by occasional bluffs and outcrops. The timber is of doubtful accessibility being somewhat difficult to log and quite a distance from the water. However, a small high lead operation is working in the southern end of the timber and may extend the logging to the higher, and in some cases, better timber. The logs are put in the water at the north end of St. Vincent Bay. The logging chance is considered to be fair.

Compartment 32, hemlock - cedar - fir, 1918.

Logged and burned from 4 to 18 years ago. The main type is made up of several sub-areas. Seed trees are sufficiently numerous and well scattered over the area. The area is well stocked. Former stand ran 40 to 50 M.B.M. per acre - fir - cedar - hemlock. The site quality is medium. Topography generally steep and quite broken by bluffs, outcrop, slides and small ravines. Occasional smooth, flat draws are to be seen. The area is very accessible so that the logging chance may be regarded as good to excellent. The logging methods used were ground lead with fore and aft roads, high-lead, truck hauling and hand-logging. A small high-lead operation is being conducted in Baker Bay. The product is poles at the present time. The poles are hauled to the water by truck. The operator is relogging the area. A few good pole roads and skidroads are to be found on the area.

Compartment 32A, fir - hemlock - cedar, 1897.

A sub-compartment composed of two sub-areas burned from 35 to 40 years ago. Seed trees are few and scattered. The reproduction is light but satisfactory. Former stand ran 30 to 50 M.B.M. per acre - fir - cedar. The site quality is good. Occasional outcrops and bluffs mar an otherwise excellent logging chance.

Compartment 32B, logged and burned, 1920.

Logged and burned about 10 years ago. Seed trees few and scattered. Reproduction slowly coming in. Soil was shallow over most of this area and evidently was damaged both by logging and by fire. Former stand ran 30 to 40 M.B.M. per acre - fir - cedar. The site quality is medium. Logging chance

is good.

Compartment 32C, mature fir - cedar.

A sub-compartment comprised of several sub-areas. The timber is light but of good quality and is generally found in pockets. These areas are the least accessible parts of the compartment. Rock bluffs, cliffs and outcrops are prevalent. However, the timber is fairly close to water so that the logging chance is medium. A tractor operation, now suspended, has been working in some of this timber near Granville Bay.

Compartment 33, Sub-A, mature cedar - fir.

The timber is of average size and grade. Some bolting has been done in this area and the best of the cedar was removed. The defect is about average - butt-rot in fir and cedar and beetles noticeably affecting hemlock. The topography is steep and broken by bluffs, slides, boulders and small, sharp ravines. The valley bottom is steep and broken also and a good grade is very difficult to find. High breakage in logging may be expected. However, the timber is close to the water making the logging chance a medium one. The north tip of this stand is on a high rocky bench and is very difficult to reach. This timber is considered to be inaccessible.

Compartment 33, Sub.B, mature cedar - fir.

The timber is small and sound but of low grade. Defect is light - a little conk in fir and hemlock, butt-rot in cedar and beetles in hemlock. The topography is steep and broken but a good grade may be found along the bottom of this narrow valley. Parts of the area near both lakes have been logged for shingle bolts. A few large cedars and silver fir (balsams) are to be found scattered over the south end of the stand. There is a thick tangle of non-commercial cover and undergrowth along the creek. A few poor skidroads lead from the south end of the area to Lena Lake. A good pole road and skidroad run from the lake to the saltwater. The logging chance is a medium one. Outlet via Lena Lake to Hotham Sound, although a small portion at the north of the stand may go north via the small lake to Prince of Wales Reach. There is a small volume of inaccessible timber on high narrow benches east of Lena Lake.

Compartment 33, Sub.C, mature inaccessible cedar - hemlock.

The timber is large and of good grade but more than normally defective. Conk and butt-rot most serious defects while beetles are noticeable in hemlock. The topography is steep and broken. The valley bottom is very narrow and steep.



The timber is in
good condition
and is generally
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with spruce and
fir. The timber
is in good
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**Looking South from vicinity of Freil Lake -
reproduction coming in well after recent
logging - plentiful supply of seed trees.
Compartment 34.**

The timber is in
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So steep and difficult to get^{at} as to be a very poor logging chance in spite of its proximity to the water. An old prospector's trail and cabin were found near a short prospect tunnel. This project has not been touched for some time.

Compartment 34, cedar - hemlock-fir 1925.

Logged and part burned 3 to 5 years ago. One small area was logged and burned 14 years ago. A high lead railroad operation logged the greater portion of the compartment but a small tractor operation and some handloggers were also active on the area. The soil is generally shallow but deep pockets are to be found throughout the area. The burn and logging has exposed considerable rock and mineral soil. Topography is moderately steep, as a rule, and broken by bluffs and outcrop. There are sufficient seed trees scattered over the area. Former stand ran 20 to 40 M.B.M. per acre - fir - cedar - hemlock. Site quality is fair. A good railroad grade runs from Freil Lake to Goliath Bay - the last portion of which is an incline. An old bolt flume leads from the lake to Hotham Sound. A good tractor road leads north from Goliath Bay for about a mile.

Compartment 34A, logged and burned, 1922.

A sub-compartment composed of several sub-areas logged and burned from 3 to 8 years ago. Shallow soil badly damaged by logging and fire. There are no seed trees on the area. Former stand ran 20 to 50 M.B.M. per acre - fir - cedar - hemlock. General site quality poor. Some areas formerly of good site, now quite poor. The logging roads mentioned in Compartment 34 tap these areas. An old trail runs from Goliath Bay to Freil Lake but is now damaged by heavy windfall.

Compartment 34B, hemlock - cedar - fir, 1872.

A sub-compartment burned about 60 years ago. There is also a small area burned about 40 years ago. The reproduction shows good growth but poor form. The soil is generally quite shallow. Site quality fair. Topography broken by outcrop and slides. Very difficult to get at as a steep, narrow valley leads from Freil Lake to a small lake in north-west corner of compartment. Parts of sub-compartment farther south and close to Freil Lake are much more accessible but the site is poorer. A poor logging chance by itself. A good volume of bolts are to be had around the small lake mentioned above. Former stand ran 20 to 40 M.B.M. per acre - fir - cedar - hemlock.

Compartment 34C, mature cedar - fir.

A sub-compartment composed of several small sub-areas. Timber of fair size and grade but part of it was badly burned 3 to 5 years ago. The fire-damaged portion, which covers most of the area, is rapidly deteriorating from decay. Butt-rot and conk are the most prevalent forms of decay. The area should be logged immediately. The topography is moderately steep but not badly broken. As the largest areas are close to Goliath Bay, the logging chance is considered to be good. However, one small area near Freil Lake would be harder to get out. Plentiful reproduction coming in under burned timber.

Compartment 35, mature inaccessible cedar - hemlock.

Timber is of good size and grade. Defect about normal. Butt-rot, centre-rot, conk and beetles (especially in hemlock and silver fir (balsam)) were the noticeable forms of damage. Topography generally steep and broken, especially north of Freil Lake. South of the lake the country is much flatter but broken by considerable outcrop. In this area the timber is poor. All this timber should have been taken out by recent logging operation at Freil Lake but the timber was regarded as non-merchantable. This timber by itself is quite inaccessible. The logging chance is poor. Outlet via Freil Lake to Goliath Bay.

Compartment 36, mature hemlock - fir.

Timber is of average size and grade. Defect also average. Conk, butt-rot, pitch-seam and windshake are the most serious defects. That part of the area close to the lake is badly burned but shingle-bolt cedar and some good fir is left. There is a heavy understory of 30-year hemlock - cedar - fir reproduction and patches of 5-year reproduction. The topography is steep and broken, bluffs, slides and outcrop are prevalent. The logging chance is poor. Timber goes out via Haslam Lake to Myrtle Point or Westview.

Compartment 37, non-productive.

A non-productive compartment of scrub and water extending between Compartments 4, Sub-A and 4, Sub-B.

Compartment 38, logged and burned, 1929.

Logged from 1 to 5 years ago by high-lead methods. Burned this year. Fire consumed slash but little damage was done to soil. Site quality fair. Former stand ran 20 to 30 M.B.M. per acre - yellow cedar - hemlock. This area was

logged primarily for yellow cedar so that only the best of the other species were removed, leaving plentiful seed trees. When the reproduction has become established timber sales might be made on this area provided contract conditions protect the young stands - also provided that the present timber licence covering the area has reverted. The topography is fairly smooth and the area close to Powell Lake making this a good logging chance. The logging operation working in Compartment 17, Sub.A takes its timber out to the lake through this compartment over a pole train road.

Date, 19 29-30

COMPARTMENT.		CAPABLE OF PRODUCING TIMBER.										NON-PRODUCTIVE.				
Locality.	No.	Mature (1).	Mature (2).	Immature							Logged or Burned.	Non-commercial Cover.	Barren.	Scrub Sites.	Grass and Meadow.	Swamp.
				1 to 20 Yrs.	21 to 40 Yrs.	41 to 60 Yrs.	61 to 80 Yrs.	81 to 100 Yrs.	Over 100 Yrs.	Selection.						
South Powell Lake	1SubA			1930										860		
" " "	1 " B			560												
" " "	1 " C			280												
" " "	2	6540												40	980	7
" " "	2A											1930				
East of Inland Lake	3SubA													1680	1600	
North " "	3 " B													340	390	
W. side Powell Lake	3 " C													980	570	
E. of Giovanni Lake	3 " D													1760	330	
E. of Haslam Lake	4 " A	5080												240		
" " "	4 " B	1640														
Haslam Lake	5			1790										1160		9
" " "	5A										2710					
" " "	5B				1270											
S. of Haslam Lake	6										9780		20			15
" " "	6A			850												
" " "	6B											1010				
Dodd Lake	7										11340		120	80		29
" " "	7A			2780												
" " "	7B				3580											
Horse Shoe Valley	8					7700										54
Gordon Pasha Valley	9			4510									440	140		2
" " "	9A										2870					
" " "	9B				1260											
" " "	9C						200									
" " "	9D											450				
Freda Creek	10	16,670	1300										190	310		9
" " "	10A										430					
S. of Goat Island	11SubA				960											
" " "	11 " B				570											
S. " "	12										6040		1540			1
Goat Lake	13			2640									460			
" " "	13A				980											
" " "	13B										880					
" " "	13C	360														
Goat Island	14				7010								2910	2840		3
" " "	14A										2490					
" " "	14B	760														
Olsen's Landing	15				3800								380	260		
Powell Lake	15A			330												
" " "	15B										1130					
" " "	15C	200														
N. of Powell Lake	16			4030												
" " "	16A				500											
" " "	16B										1520					
Chippewa Bay-Pow. Lk.	17SubA	2500												200		
Olsen's Landing	17 " B	1590														
N. Powell Lake	17 " C	1300														
Jim Brown Creek	17 " D	880	140													25
Powell River	18	10690	550													
" " "	18A			970												

Classification of Areas (in Acres).

POWELL.

Provincial Forest

Date, 19 2

COMPARTMENT.		CAPABLE OF PRODUCING TIMBER.										NON-PRODUCTIVE			
Locality.	No.	Mature (1).	Mature (2).	Immature.							Logged or Burned.	Non-commercial Cover.	Barren.	Scrub Sites.	Grass and Meadow.
				1 to 20 Yrs.	21 to 40 Yrs.	41 to 60 Yrs.	61 to 80 Yrs.	81 to 100 Yrs.	Over 100 Yrs.	Selection.					
Powell Lake	19														
Powell and Goat Lakes	20												94,290	71,410	
Dodd Lake	21SubA												1,100		
" "	21 " B												860		
Eldred River	22	11,060													
Goat Lake	23SubA	520													
" "	23 " B	940													
Gordon Pasha Lakes	24														
Scanlon Creek	25	2,660	960											490	
Khartoum Lake	26SubA	3,420													
" "	26 " B	1,660													
" "	26 " C	580													
Jervis Inlet	27	7,380												1,410	
W.of Hotham Sound	28												1,400	3,590	
S.of Gordon Pasha I	29													3,160	
Jervis Inlet	30										1,470			220	
" "	30A			1,090											
" "	30B				470										
St.Vincent Bay	31				1,480								110	1,000	
" "	31A			840											
" "	31B										280				
" "	31C	150													
Hotham Sound	32			970									430	210	
" "	32A				240										
" "	32B										370				
" "	32C	370													
" "	33SubA	180	20												
" "	33 " B	530	70												
" "	33 " C		150												
Freil Lake	34			1,820										1,370	
" "	34A										510				
" "	34B					450									
" "	34C	190													
" "	35		840											30	
Haslam Lake	36	1,180													
" "	37													3,590	
Whippewa Bay	38										440				
Grand Total		79,030	4,030	25,390	22,120	8,150	200				42,260	3,390	110,450	95,040	

CAPABLE OF PRODUCING TIMBER.										NON-PRODUCTIVE.					TOTAL.	REMARKS.
2).	Immature.							Logged or Burned.	Non- commercial Cover.	Barren.	Scrub Sites.	Grass and Meadow.	Swamp.	Water.		
	1 to 20 Yrs.	21 to 40 Yrs.	41 to 60 Yrs.	61 to 80 Yrs.	81 to 100 Yrs.	Over 100 Yrs.	Selection.									
60										94,290 1,100 860	71,410			28,650 490	28,650 165,190	Water Compartment. Non-productive Compartment.
													50	60	11,170	" " "
															520	
															940	
														3,830	3,830	Water Compartment.
												490	20	70	4,200	
															3,420	
															1,660	
															580	
											1,400	1,410 3,590 3,160 220			60 30	8,850 5,020
20 70 50	1,090							1,470							3,160	" " "
															1,690	
															1,090	
															470	
	840	470 1,480								110	1,000		20		2,610	
															840	
															280	
															150	
	970									430	210			40	1,650	
			240													240
40															370	
															370	
															200	
															600	
	1,820														150	
											1,370		40	610	3,840	
															510	
															450	
															190	
															870	
30															1,180	
														10	3,600	
											3,590				440	
30	25,390	22,120	8,150	200				42,260	3,390	110,450	95,040		1,570	43,030	434,660	
				</												

CRUISE OF

P. WELL.

Provincial Forest.

Date, 19 29-30

C.P. 341-3M-329-5479
Compartment

Section, Lot, or Strip No.	Forty No.	ACRES OF										TOTAL ACRES.	Total Volume - M.B.M.								Summary of Salvageable Shingles			
		Mer- chantable (1).	Mer- chantable (2).	Im- mature.	Logged or burned.	Non-com- mercial.	Barren.	Scrub.	Grass.	Swamp.	Water.		F.	C.	H.	B.	Cy.	P.	S.	Total	Comp. No.	Total.		
SUMMARY OF MATURE ACCESSIBLE TIMBER.																								
2		6540					40	980		70	1040	8670	147889	28543	2517				617	179,576	5			
4 Sub A		5080					240				80	5400	22653	37398	13009	4368	13947	3118		94,493	7			
" " B		1640									50	1690	6788	28825	16311	5492	2748	250		60,414	8			
10		16430	1300	240			190	310		90	210	18770	165737	232571	159560	55434	21449	1785	277	636,813	9			
17 Sub A		2500						200				2700	10000	10000	12500	12500	7500			52,500	12			
17 " B		1590									10	1600		430	57543	17215	6615			81,803	13			
17 " C		1300										1300		22720	8060	1040	5340			37,160	14			
17 " D		880	140									1020	1010	30730	8150	5190		1220		46,300	15			
x 18		10640	550			50				250	70	11560	30730	138710	7949	42650		200	19640	311,420	16			
22		11060								50	60	11170	48170	137910	14493	88065	7965			427,040	31			
23 Sub A		520										520	250	4050	12710	5050	280			22,340	34			
23 " B		940										940	1100	9250	20970	12290	120			43,730				
x 25		2660	960					490		20	70	4200	50808	37947	26745	4354	1529	287	569	122,239	Grand Total			
26 Sub A		3420										3420	12179	83027	30337	23550		803		149,896				
26 " B		1660										1660	10163	30125	16828	9041	4452			70,609				
26 " C		580										580	7326	16650	3729	407	770			28,882				
27		7320			60			1410			60	8850	173314	41436	45862	405	4563	2381		267,961				
x 33 Sub A		180	20									200	1962	2904	784					5,650				
x 33 " B		530	70									600	5038	10025	3514	53	392	132		19,154				
36		1180										1180	6210	958	7319	98	1366	57		16,008				
13C		360										360	5400	4320	1080					10,800				
14B		760										760	6615	1110						7,725				
15C		200										200	7531	6678	489			30	58	14,786	Mature Timber in Immature			
31C		170										170	3959	637	2167					6,763				
32C		350										350	4739	2037	982					7,758				
34C		190										190	1188	1234						2,422				
Grand Total:		78,680	(3040)	240	60	50	470	3390		480	1650	88,060	730,769	920,225	675,586	287,202	79,036	8857	22,567	2,724,242	Acreage of inaccessible timber in subtypes marked			
SUMMARY OF MATURE INACCESSIBLE TIMBER.																								
10			1300									1300	425	2695	22790	28664	4511			59,085				
17 Sub D			140									140		140	540	580	140			1,400				
18			550									550	1400	3720	2320	1860				9,300				
25			960									960	7194	11494	23042	3492	2802			48,024				
33 Sub A			20	x								20	177	261	71					509				
33 " B			70	x								70	665	1325	464	7	52	17		2,530				
33 " C			150									150	588	4305	1641					6,534				
35			840	x				30				870	4910	9795	6215	3530	185	140		24,775				
Total:			4030									4060	15,359	33,735	57,083	38,133	7,690	157		152,157				

TOTAL ACRES.										Total Volume - M.B.M.										Summary of Salvageable Shingle Bolts in Immature Compartments.										TOTALS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Scrub.	Grass.	Swamp.	Water.		F.	C.	H.	B.	Cy.	P.	S.		Total		Comp. No.		Total	Cords.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

Mature Timber in Immature Compartments.

Acreage of inaccessible

CRUISE OF

POWELL.

Provincial Forest.

Date, 19 29-30

C.B. 341-2M-329-5479

Compartment		Forty No.	ACRES OF										TOTAL ACRES.	Total Volume - M.B.M.										Summary of All Compartments	
-Section, -Lot, or Strip- No.	No.		Mer- chantable (1).	Mer- chantable (2).	Im- mature.	Logged or Burned.	Non-com- mercial.	Barren.	Scrub.	Grass.	Swamp.	Water.		F	C	H	B	Cy	P	S	Total	No.	7		
Summary of Mature Accessible Alienated Timber.																									
2		4680											4680	11460	22771	2088		561			140,028				
4 Sub A		70											70	8	260	173	116	421	39		1,097				
4 " B		50											50	721	1092	426	401	140	9		2,789				
10		12900											12900	14630	190996	118394	43335	13893	1370	274	514,568				
17 Sub A		1550											1550	615	6155	7700	7700	4620			32,330				
17 " D		580											580	810	20505	5145	2550		980		29,990				
18		2800											2800	2500	81880	18000	14200		200	6720	123,500				
22		6300											6300	45832	104000	69308	49695				268,835				
23 Sub A		140											140	70	1050	3300	1310	70			5,800				
25		1330											1330	17053	24482	11095	3458	784			56,872				
26 Sub A		3000											3000	9820	72612	27335	21670		739		132,176				
26 " B		1270											1270	7788	23110	13008	6986	3337			54,229				
26 " C		490											490	6126	13923	3119	340	644			24,152				
27		4870											4870	112833	29101	31220	334	821	1122		175,431				
32C		120											120	1300	400	300					2,000				
33 Sub A		130											130	1418	2096	566					4,080				
33 " B		170											170	1613	3215	1127	17	126	42		6,140				
Grand Total		40450											40450	475041	597648	312304	152112	25836	3343	7733	1,574,017				
Summary of Mature Inaccessible Alienated Timber.																									
18		200											200	510	1350	840	680				3,380				

				TOTAL ACRES.	Total Volume - M.B.M.										Summary of Alienated Salvageable Shingle Bolts in				TOTALS.
Scrub.	Grass.	Swamp.	Water.		F	C	H	B	Cy	P	S		Total		Compartment No.	Total Cords		Immature Compartments.	
					Summary of Mature Accessible Alienated Timber.														
				4680	114608	22771	2088			561			140,028		7	22,000			
				70	88	260	173	116	421	39			1,097						
				50	721	1092	426	401	140	9			2,789						
				12900	146306	190996	118394	43335	13893	1370	274		514,568						
				1550	6155	6155	7700	7700	4620				32,330						
				580	810	20505	5145	2550			980		29,990						
				2800	2500	81880	18000	14200		200	6720		123,500						
				6300	45832	104000	69308	49695					268,835						
				140	70	1050	3300	1310	70				5,800						
				1330	17053	24482	11095	3458	784				56,872						
				3000	9820	72612	27335	21670			739		132,176						
				1270	7788	23110	13008	6986	3337				54,229						
				490	6126	13923	3119	340	644				24,152						
				4870	112833	29101	31220	334	821	1122			175,431						
				120	1300	400	300						2,000						
				130	1418	2096	566						4,080						
				170	1613	3215	1127	17	126	42			6,140						
					40450	475041	597648	312304	152112	25836	3343	7733	1,574,017						
					Summary of Mature Inaccessible Alienated Timber.														
				200	510	1350	840	680					3,380						

IMMATURE TIMBER.

POWELL.

Provincial Forest.

Summary of Immature Compartment
Date, 19.29-30 Type

F.B. 84-4M-320-5478

Compartment Section, Let. or Strip No.	PRODUCTIVE (Acres).					NON-PRODUCTIVE (Acres).					TOTAL ACRES.	DESCRIPTION (per Acre).																					
	IMMATURE.		Mature Merchant- able.	Logged or Burned.	Non- Com- mer- cial.	Barren.	Scrub Sites.	Grass and Mead- ow.	Swamp.	Water.		STRIP.		D.B.H.					TOTAL HEIGHT.					TOTAL AGE.					NUMBER.				
	Main Type.	Sub- types.										Chainage.	Acres.	F	C	H	P		F	C	H			F	C	H			F	C	H		
1-20 yr. Compartments.																																	
1 Sub A	1930						860				2790	Average		1.2	.5	.9		16	8	10				15	15	15		1602	584	559	1		
1 " B	560										560	"		.7	.6	.6		11	10	11				14	11	14		150	410	1670			
1 " C	280										280	"		Seedlings & Saplings					1	-	10				5	-	15		1327	63	165	15	
5	1790					1160			90	2950	5990	"		Seedlings					1	-	3				1	-	5		392	1216	1102	21	
6A	850										850	"		"					1	-	7				1	-	10		2236	142	306	2	
7A	2780										2780	"		"					1	-	5				1	-	5		547	1480	1779	10	
9	4510					440	140		20	10	5120	"		Seedlings "					1	-	15				5	-	15		724	784	1253	38	
13	2640					460					3100	"		1.5		1.5		10	3	4				12	12	12		1580	480	590	3		
15A	330										330	"		Seedlings					1	-	5				1	-	6		1230	25	25	10	
16	4030										4030	"		2.7	.5	.8	1.0	26	6	10				20	11	14		338	1300	332	16		
18A	970										970	"		"														Satisfactory					
30A	1040		20	30							1090	"		Seedlings & Saplings					1	-	15				1	-	20		505	1004	998		
31A	840										840	"		"					3	-	8				5	-	15		97	610	1116		
32	970					430	210			40	1650	"		"					5	-	12				5	-	12		100	695	955		
34	1820					1370			40	610	3840	"		"					1	-	5				1	-	6		150	835	1010	4	
21 - 40 yr. Compartments.																																	
5B	1270										1270	Average		3.3	2.3	2.7	2.4		32	17	24				33	34	32		805	260	626	18	
7B	3480	100									3580	"		3.6	1.4	2.3		2.5	28	11	20		13		30	28	30		30	675	343	1185	1
9B	1210	50									1260	"		3.8	2.1	2.9	2.5		31	15	23				33	33	31		466	124	407	19	
11 Sub A	960										960	"		1.7					15	4	9				21		21		3200	2667	1500	7	
11 " B	570										570	"		3.5					30						30				433	145	100		
13B	980										980	"		4.9	2.0	2.0	3.0	1.0	35	15	19				33	28	29		285	535	1810	3	
14	7010					2910	2840		30	560	13350	"		3.5	1.9	2.5			30	14	22				27	23	27		984	293	560	5	
15	3800					380	260				4440	"		3.1	2.0	1.9			30	20	20				30	30	30		792	128	499	6	
16A	500										500	"		2.8	2.8	3.3			30	24	35				25	26	29		113	780	960		
30B	470										470	"		1.8	1.3	1.5			20						25				612	260	1115	3	
31	1480					110	1000		20		2610	"		3.2	2.2	2.6			35	22	27				31	31	32		108	332	1484	6	
32A	240										240	"		3.9	2.8	4.1			41	25	40				33	26	30		340	60	190		
41 - 60 yrs. Compartments.																																	
8	7380				320						540	1020	9260	7.2	5.3	4.7	6.5		63	47	45				51	49	46		202	125	147	8	
34B	370	80									450			5.7	5.3	6.3			70	45	65				58	52	55		80	385	635		
61 - 80 yrs. Compartments.																																	
9C	200										200			8.0	3.1	4.3	7.4		40	35	42	30			75	75	75	75		197	495	1100	180

POWELL.

Provincial Forest.

Summary of Immature Compartments.
Date, 19 29-30 Type

Age-class years.

Compartment No.

Sheet No. 46

RODUCTIVE (Acres).			TOTAL ACRES.	DESCRIPTION (per Acre).																								REMARKS. (Former Stand, Date of Fire, or other History.)					
Grass and Mead- ow.	Swamp.	Water.		STRIP.		D.B.H.					TOTAL HEIGHT.					TOTAL AGE.					NUMBER.					SEED TREES.							
				Chainage.	Acres.	F	C	H	P		F	C	H			F	C	H			F	C	H	P	Other Species	Total.							
0 yr. Compartments.																																	
			2790	Average		1.2	.5	.9			16	8	10			15	15	15			1602	584	559	1		2746							
			560	"		.7	.6	.6			11	10	11			14	11	14			150	410	1670			2330	x						
			280	"		Seedlings & Saplings					1	-	10			5	-	15			1327	63	165	15		1570							
	90	2950	5990	"		Seedlings					1	-	3			1	-	5			392	1216	1102	21		2732	x						
			850	"		"					1	-	7			1	-	10			2236	142	306	2		2686							
			2780	"		"					1	-	5			1	-	5			547	1480	1779	10	13	3830	x						
	20	10	5120	"		Seedlings "					1	-	15			5	-	15			724	784	1253	38	21	2820							
			3100	"		1.5		1.5			10	3	4			12	12	12			1580	480	590	3		2653							
			330	"		Seedlings					1	-	5			1	-	6			1230	25	25	10		1290							
			4030	"		2.7	.5	.8	1.0		26	6	10			20	11	14			338	1300	332	16		1986							
			970	"		Seedlings & Saplings					1	-	15			1	-	20			Satisfactory					2507							
			1090	"		"					3	-	8			5	-	15			97	610	1116			1823	x						
		40	840	"		"					5	-	12			5	-	12			100	695	955			1750	x						
	40	610	3840	"		"					1	-	5			1	-	6			150	835	1010	4	76	2075	x						
40 yr. Compartments.																	Summary of Immature Compartments.																
			1270	Average		F	C	H	P	B	F	C	H	P	B	F	C	H	P	B	F	C	H	P	Other Species								
			3580	"		3.3	2.3	2.7	2.4		32	17	24			33	34	32			30	28	30		30	675	343	1185	1	60	2264		
			1260	"		3.8	2.1	2.9	2.5		31	15	23			33	33	31			33	33	31			466	124	407	19		1016		
			960	"		1.7					15	4	9			21		21			21		21			3200	2667	1500	7		7373		
			570	"		3.5					30					30					30					433	145	100			673		
			980	"		4.9	2.0	2.0	3.0	1.0	35	15	19			33	28	29			33	28	29			285	535	1810	3	2	2635		
	30	560	13350	"		3.5	1.9	2.5			30	14	22			27	23	27			27	23	27			984	293	560	5	42	1880		
			4440	"		3.1	2.0	1.9			30	20	20			30	30	30			30	30	30			792	128	499	6	1	1426		
			500	"		2.8	2.8	3.3			30	24	35			25	26	29			25	26	29			113	780	960		27	1880 x		
			470	"		1.8	1.3	1.5			20					25					25					612	260	1115	3		1990		
	20		2610	"		3.2	2.2	2.6			35	22	27			31	31	32			31	31	32			108	332	1484	6		1930 x		
			240	"		3.9	2.8	4.1			41	25	40			33	26	30			33	26	30			340	60	190			590		
60 yrs. Compartments.																																	
			5401020	9260		7.2	5.3	4.7	6.5		63	47	45			51	49	46			202	125	147	8	1	483							
			450			5.7	5.3	6.3			70	45	65			58	52	55			80	385	635			1100	x						
80 yrs. Compartments.																																	
			200			8.0	3.1	4.3	7.4		40	35	42	30		75	75	75	75		197	495	1100	180		1972	x						

APPENDIX 11.

LAND CLASSIFICATION REPORT
of
POWELL PROVINCIAL FOREST.

The Project
Topography
Climate
Irrigation possibilities
Forest cover
Clearing costs
Soil
Possibilities for crops.

The Project:

The purpose of this survey was to classify lands in order that the boundary of the Powell Provincial Forest might be permanently located. The areas examined include lots along the shores and in valleys adjacent to Powell Lake, as well as a large area extending along the shores of Malaspina Strait and Jervis Inlet from Powell River to Hotham Sound. This latter area varies in width from a few chains to six miles with a somewhat greater extension northward into the Horseshoe Valley.

For summary of area reported on by individual lots see summary sheets at end of report.

LAND CLASSIFICATION.Summary Land Classification - POWELL FOREST - 1929-1930.

Agricultural Soil	{1}	3,884 acres
"	{2}	<u>5,560</u> "
Total	"	9,444 acres
Forest Soil.....		<u>31,491</u> "
Total area examined		<u>40,935</u> acres

Recommended for Agriculture.AlienatedCrown Land.

Soil {1}	-	561 acres	Soil {1}	-	1,108 acres
" {2}	-	434 "	" {2}	-	1,990 "
Forest Soil....		<u>1,111</u> "	Forest Soil		<u>1,523</u> "
Total.....		<u>2,106</u> "	Total.....		<u>4,621</u> "

Recommended for Forest.AlienatedCrown Land.

Soil {1}	-	1,207 acres	Soil {1}	-	1,008 acres
" {2}	-	581 "	" {2}	-	2,555 "
Forest soil..		<u>8,847</u> "	Forest soil		<u>20,010</u> "
Total.....		<u>10,635</u> "	Total.....		<u>23,573</u> "

Statutory Classification of Land.

1st Class	-	1,393 acres
2nd "	-	<u>39,542</u> "
Total.....		<u>40,935</u> acres

"K. F. Moffatt"
Examiner.

Topography:

The lots that were examined along the shores of Powell Lake usually consisted of a small strip of gently sloping land along the shore or narrow benches above the lake level. A few chains from the shore line the mountains rise precipitously to very high altitudes.

Olsen Valley presents a narrow steeply walled compartment. The floor of the valley is nowhere more than 20 chains wide and immediately rises into high steeply sloping hills on either side.

The main tract along Malaspina Strait presents a gently rolling aspect towards the south and south-west. The terrain rises from sea level to 2000 feet along the north boundary of Lot 913. Scattered over the whole area are small rocky knolls rising about 300 feet above the surrounding country as for instance those hills south and east of Hammil Lake and those smaller knolls immediately east of Cranberry and south of Haslam Lakes.

The main valley of the Horseshoe River, extending north from Lois Lake to Dodd Lake, is of fair width with a flat bottom. The hills rise very steeply on every side and offer a very definite boundary to the agriculturally possible land.

Small parcels of agriculturally possible land are found in pockets along the narrow abrupt shore line of Jervis Inlet between Stillwater and Hotham Sound.

Climate.

(a) Rainfall. The average rainfall for Powell River on a monthly basis can be seen from Table 1.

This shows an average annual rainfall for the growing season (May to September) of 8.33 inches. Over the same period Armstrong gets 6.91 inches and Vernon 6.58 inches.

(b) Temperature: The average temperature for Powell River on a monthly basis can be seen from Table 2.

The average relative humidity taken as from Vancouver can be seen from Table 3.

Irrigation Possibilities.

Under usual conditions it should not be necessary to irrigate over the section under discussion if one compares its rainfall of 8.33 inches for the growing season to Armstrong with 6.91 inches for a like period. They do not find it necessary to irrigate at Armstrong but irrigation is quite a problem at Vernon where the average rainfall for the growing season is around 6.58 inches.

It is generally believed that, under the present methods of tillage, irrigation is necessary, not because of the lack of moisture, but because of the porosity of the soil.

The farmers in the vicinity of Long Creek and Kelly Creek claim that they could increase their acreage and yields if irrigation water were available.

It is generally presumed that irrigation is necessary for the complete and satisfactory development of tree fruits of which there is quite a large amount in this vicinity.

The Powell River Pulp and Paper Company established a dam at the outlet of Duck Lake to raise the level of Duck and Haslam Lakes for domestic purposes: irrigation water could be supplied to the district with a very small capital expenditure. Whether or not this will be effected is highly presumptive.

Horseshoe Valley is generally considered to get more moisture than does the surrounding country and it would seem that no irrigation is necessary on this area.

Forest Cover.

Timber. Any portion of the tract under discussion, which, without close scrutiny, might appear to be agricultural land carries no timber now. All areas which are closely accessible have been logged and the slash very effectively disposed of.

The Horseshoe Valley is well covered by young fir, hemlock, cedar of about 75 years which has grown to piling size and is a fine stand.

Reproduction.

Most of the area has been so recently fired or was burned so effectively when fired that, with the exception of small scattered patches, there is very little reproduction coming in. Willow is, for the most part, forming the ground cover where the area has been burned for some time.

Swamp Lands.

There is a certain amount of scrub timber scattered throughout the area in swamps and has seed trees in small clumps. Most of the swamps also are covered by a heavy growth of alder and willow.

Clearing Costs.

Clearing costs always vary according to the methods used in assembling the debris for burning. Some areas have large stumps averaging 6' on the butt with very few per acre while other acreages have larger numbers of smaller stumps. A small gas donkey clearing a patch of the former land with the efficacious use of powder, was doing it for about \$45.00 an acre. Some acreages would cost decidedly more than this while other areas might be cleared for somewhat less.

Soil.

Origin. The soils of this area are, for the most part, derived from the glaciation of agneous rocks. These soils can be considered to be young soils in the sense of weathering and layering of salts. The physical characteristics of these soils have been changed as the result of forest fires which have repeatedly swept over the country during the past 15 years. It would seem that the fires have driven off the water of crystallization, thus destroying the capacity of the soil for capillary moisture and making it extremely porous.

Types.

Sandy Loam. Although sandy loam is not usually considered to be of the forest type of soil, it holds good prospects of cropping abundantly when efficiently managed. The sandy loam of this vicinity has been rather badly calcinated and would need to be built up considerably in humus before satisfactory crops can be hoped for.

Peat and Muck. Scattered promiscuously over the face of the lower benches are small swamps. Some of these swamps are covered by mosses, species of Kalmia and Labrador Tea, which do not afford a stable surface and would be of no value when cleared. These areas tend to have a high acid reaction.

On the other hand some of these swamp areas have become stabilized by the introduction of alder and willow in the later stages of deposition. These soils are more mellow and favourable to crop production. When cleared and limed these areas are usually very useful in the growth of certain crops.

Cultivable Stony Soils. There are quite large areas of what might be termed very stony sandy loam covering the departments under discussion. This soil has been very badly burned with the consequent depletion of the humus content making the ground appear stonier than it actually would be were it in good tilth.

These soils have some promise of becoming productive under an efficient system of management.

Possibilities for crops.

Scattered over the district around Powell River are quite a number of farms supplying produce for consumption in the town. There are a number of farms supplying milk and cream to Powell River and its suburbs and with the rapid growth of the town there will be opportunities for more people in the business.

Goat breeding is progressing favourably and a number of small herds have been established to supply milk to the district. Again this industry could be increased with the growth in population.

Crops such as Fall wheat, spring wheat, oats and rye are grown but just for home consumption. Hay and clover produce excellent crops over most of the area and potatoes give high yields, under satisfactory conditions.

There are a few apple orchards in the area which cannot be said to be in the best of condition. Soil conditions seem to work against good orchard practice. Small fruits do well, however, and excellent crops from small acreages are prevalent.

There is no doubt the poultry raising in this district could be made into a profitable venture.

PROVINCIAL FOREST

TOTAL REC

SOIL CLASSIFICATION.										Statutory Classification of LAND.		Merchantable Timber.		REMARKS.
DED FOR AGRICULTURE.			RECOMMENDED FOR FOREST.											
CROWN LAND.			ALIENATED.				CROWN LAND.							
Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	First.	Second.	Acres.	M.B.M.	
					100	340 160 305 624 258					440 160 305 624 258			
				180	27	597 320 109				50	597 320 266 365 200 200			
											200 200 200 200 200 200 144 160			
56	54		50					20 10 120 20		56	160 160 160 160 160 456 240 270 270 270 270 270 270 270 270 285 200 180 200 200			
											160 160 160 160 160 456 240 270 270 270 270 270 270 270 270 285 200 180 200 200	160 64 176 96		
											160 175 140 155 150 64 308 124 136 180 180 180 125 88 379 402 35 95	16 16		
											64 308 124 136 180 180 180 125 88 379 402 35 95			
											44 5 175 125 88 379 402 35 95	25 24 56	375 360 840	
											180 160 47 70 130			76 acres to be flooded 80 " " " "
							75 45	155 100 65		60	572			
				86		47				86	47 70 130			(The 86 acres of sandy loam flooded by high water)
							66			28				
56	54		50	266	127	2760	214	588	7794	308	11601			TOTAL RECOMMENDED FOR AGRICULTURE.....ACRES; FOR FOREST.....ACRES.

LAND CLASSIFICATION OF

POWELL PROVINCIAL FOREST

SOIL CLASSIFICATION.

Section or Lot Number.	Block No.	Total Acres.	SOIL CLASSIFICATION.												Statutory Classification of LAND.		Merchantable Timber.	
			RECOMMENDED FOR AGRICULTURE.						RECOMMENDED FOR FOREST.									
			ALIENATED.			CROWN LAND.			ALIENATED.			CROWN LAND.						
			1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	First.	Second.	Acres.	M.B.M.
Carried fw'd.		11909				56	54	50	266	127	2760	214	588	7794	308	11601		
1237	N	232												232		232		
1238		107										82		25		107		
1239		251								30	221					251		
1371		1263										96	144	1023	96	1167		
1527	1	142	40	60	42										14	128		
"	9	100								5	95					100		
"	10	120							20	50	50					120	55	1706
"	11	158.4	35	75	48.4										12	146.4		
"	12	152.5	100	50	2.5										35	117.5		
1571		320								57	263					320		
1573		290										100	24	166		290		
1574		326							25		301					326		
1590		822										5		827		822		
1630		155	90		65											155		
1730		260							35		225					260		
1909		158							2		156					158	8	120
2091		172	140		32											172	5	
2558		42									42					42		
2620		316.6							38		278.6					316.6		
2621		89.3							45		44.3					89.3		
2622		406.8							143		263.8				50	356.8		
2676				100	196											296		
2695		640												640		640	8	288
2805		267							10	20	237					267		
3036		242.1												242.1		242.1		
3039		91												91		91		
3256		162							23		139				3	159		
3257		91.2							5		86.2					91.2		
3429		52							3		49					52		
3430		78									78					78		
3433		130									130					130		
3450		188	8		180										3	185		
3504		80							12		68					80		
3505		92.2	38		54.2										5	87.2		
3557		171							10		161					171		
3776		108							10		98					108		
3805		92.7												92.7		92.7		
3806		92.7												92.7		92.7		
3807		92.7												92.7		92.7		
3808		80												80		80		
3809		80										10		70		80		
3810		80.1										5	7	68.1		80.1		
3811		80.1										10	48	22.1	5	75.1		
3812		80.1										8	16	56.1	4	76.1		
3813		80											10	70		80		
3814		80											45	35		80		
3815		80.2										10	40	30.2	5	75.2		
3816		80.2											25	55.2		80.2		
3817		80.3											10	70.3		80.3		
		21570.2	451	285	620.1	56	54	50	647	289	5745.9	540	957	11875.2	540	21030.2		
TOTAL RECOMMENDED																		

TOTAL RECOMMENDED

LAND CLASSIFICATION OF

POWELL

PROVINCIAL FOREST

SOIL CLASSIFICATION.

Statutory
Classification
of
LAND.

Merchantable
Timber.

RECOMMENDED FOR AGRICULTURE.

RECOMMENDED FOR FOREST.

ALIENATED.

CROWN LAND.

ALIENATED.

CROWN LAND.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

First.

Second.

Acres.

M.B.M.

Carried forward. 21570.2

451

285

620.1

56

54

50

647

289

5745.9

540

957

11875.2

540

21030.2

3818

40

25

10

5

3819

45.2

45.2

3820

46.1

20

20

6.1

3821

47.1

35

12.1

3835

160

3836

68.1

8

12

148

3839

172

1

60.1

3906

105

5

10

171

2

103

4036

52

90

52

52

4055A

41

41

4055

184

184

184

4121

183

120

63

183

4333

194

21

173

10

184

4334

12.9

12.9

12.9

4416

60

20

10

30

15

45

4418

46

46

46

4419

45.6

45.6

45.6

4420

40

40

40

4421

38.8

38.8

38.8

4422

37.3

37.3

37.3

4423

122

18

104

122

4424

101

1

100

101

4425

89.8

1

88.8

89.8

4426

84.8

10

74.8

84.8

4528

40

40

40

4529

46

46

46

4530

39.5

39.5

39.5

4531

27.5

5

22.5

27.5

4533

47.8

5

42.8

47.8

4534

50.8

50.8

50.8

4535

16.8

16.8

16.8

4536

29.8

29.8

29.8

4614

13.5

13.5

13.5

4701

160

6

154

160

4702

84.4

5

79.4

84.4

4703

162

80

7

75

162

4704

158

11

147

158

4705

159

50

109

20

139

4706

159

159

159

4710

165

35

130

165

4711

80

80

80

4712

80

80

80

4713

80

80

80

4714

80

76

80

4715

80.1

20

60.1

3

80.1

4716

80.1

13

67.1

14

77.1

4717

84.9

25

20

39.9

14

70.9

4718

84.9

20

64.9

84.9

4720

166.4

25

141.4

166.4

25761.4

661.2

305

770.4

76

109

105.5

918

356

7787.1

597.9

992

13083.3

636

25125.4

TOTAL RECOMM

SOIL CLASSIFICATION.

ENDED FOR AGRICULTURE.

RECOMMENDED FOR FOREST.

Statutory
Classification
of
LAND.Merchantable
Timber.

REMARKS.

Forest.	CROWN LAND.		Forest.	ALIENATED.		Forest.	CROWN LAND.		Forest.	First.	Second.	Acres.		
	1st Class.	2nd Class.		1st Class.	2nd Class.		1st Class.	2nd Class.						
620.1 5	56	54	50	647	289	5745.9	540	957	11875.2	540	21030.2			
										20	40			
	20	20	6.1							12	25.2			
		35	12.1								34.1			
											47.1			
				8	12	148					160			
				1		60.1					68.1			
				5	10	171				2	172			
						90					103			
									52		52			
									41		41			
63						184					184			
										10	183			
							21		173		184			
							12.9				12.9			
30										15	45			
											46			
											45.6			
											40			
38.8											38.8			
			37.3								37.3			
					18	104					122			
				1		100					101			
				1		88.8					89.8			
				10		74.8					84.8			
											40			
											46			
											39.5			
								5			27.5			
								5			42.8			
											50.8			
											16.8			
											29.8			
13.5											13.5			
				6		154					160			
				5		79.4					84.4			
				80	7	75					162			
				11		147				20	158			
				50		109					139			
						159					159			
				35		130					165			
											80			
											80			
											80			
											80			
							4				80			
				20		60.1					80.1			
				13		67.1				3	77.1			
				25	20	39.9				14	70.9			
							20				84.9			
								25	64.9		166.4			
									141.4					
770.4	76	109	105.5	918	356	7787.1	597.9	992	13083.3	636	25125.4			

TOTAL RECOMMENDED FOR AGRICULTURE.....ACRES; FOR FOREST.....ACRES.

LAND CLASSIFICATION OF

POWELL

PROVINCIAL FOREST

SOIL CLASSIFICATION.

Statutory
Classification
of
LAND.

Merchantable
Timber.

RECOMMENDED FOR AGRICULTURE.

RECOMMENDED FOR FOREST.

ALIENATED.

CROWN LAND.

ALIENATED.

CROWN LAND.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

First.

Second.

Acres.

M.B.M.

Carried fw'd.	25761.4	661.2	305	770.4	76	109	105.5	918	356	7787.1	597.9	992	13083.3	636	25125.4		
4721	133											25	108		133		
4727	120				75	30	15							20	100		
4729	154												154		154		
4808	79.3										20	20	39.3	8	71.3		
4809	107							5		102		5	80.6		107		
4810	85.6												85.6		85.6		
4811	85.6												85.6		85.6		
4812	80												80		80		
4813	80										7		73	2	78		
4822	74.7								10	64.7					74.7		
4823	185											10	175		185		
4824	66											7	59		66		
4829	98.9							5		93.9				5	93.9		
4830	96.8												15.8		96.8		
4831	135							5		130				3	132		
5094	1290				100	100						160	930	100	1190		
5101	40				20	20									40		
5102	40					20									40		
5103	40	20				20								2	38		
5104	40				10	30									40		
5109	40	5	15		5	15									40		
5110	40	20	20												40		
5111	40				10	30									40		
5112	40				30	10								5	35		
5115	40					40									40		
5116	40					40									40		
5117	40					40									40		
5118	40					25	15								40		
5119	40					40									40		
5120	40					40									40		
5125	40					35	5								40		
5126	40					35	5								40		
5127	40					40									40		
5128	40					40									40		
5129	40					40									40		
5130	40					25	15								40		
5132	48.3		25	23.3											48.3		
5133	60.2		10	50.2											60.2		
5134	51.3		10	41.3											51.3		
5135	56.1			56.1											56.1		
5136	60.4			60.4											60.4		
5137	63.2			63.2											63.2		
5138	65.3						65.3								65.3		
5139	66.4		10	56.4											66.4		
5146	92.7											20	72.7		92.7		
5147	92.7											20	72.7		92.7		
5148	92.7												92.7		92.7		
5161	92.7										5	5	82.7		92.7		
5162	92.7												92.7		92.7		

30367.0	706.2	395	1121.3	326	844	225.8	933	366	8177.7	629.9	1279.8	15362.3	781	29586.0		
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TOTAL RECOMMEND

[illegible]

LAND CLASSIFICATION OF

POWELL

PROVINCIAL FOREST

Section or Lot Number.	Block No.	Total Acres.	SOIL CLASSIFICATION.												Statutory Classification of LAND.		Merchantable Timber.		
			RECOMMENDED FOR AGRICULTURE.						RECOMMENDED FOR FOREST.										
			ALIENATED.			CROWN LAND.			ALIENATED.			CROWN LAND.							
			1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	First.	Second.	Acres.	M.B.M.	
Carried fw'd.		30367.0	706.2	395	1121.3	326	844	225.8	933	366	8177.7	629.9	1279.8	15362.3	781	29586.0			
5163		92.7												92.7		92.7			Dele to
5164		40					35	5						40		40			
5171		39.6						39.6						39.6		39.6			
5172		40					35	5						40		40			"
5173		40				25	15							10		30			
5174		40				5		35								40			
5175		40						40								40			
5176		40				10	10	20								40			
5177		40					30	10								40			"
5178		39.6						39.6								39.6			"
5182		40				5	20	15								40			
5183		40						40								40			
5184		40						40								40			
5186		40						40								40			
5187		40				25	10	5						15		25			
5200		32.1			32.1											32.1			
5226		46.7											35	11.7		46.7			
5227		46.7											40	6.7		46.7			
5228		46.7											28	18.7		46.7			
5229		46											10	36		46			
5230		46											30	16		46			
5231		46											25	21		46			
5236		45				5	15	25							5	45			
5237		45				10	15	20								40			
5242		46												46		46			
5243		46											10	36		46			
5253		46.7				15	30	1.7								46.7			
5254		46.7											35	11.7		46.7			
5255		46.7										5		41.7		46.7			
5256		40											5	35		40			
5257		40	25	10	5										5	35			
5258		40				25	10	5								40			
5259		40				10	30								2	38			
5263		50										25	25		5	45			
5264		51.7										10	25	16.7		51.7			
5283		52.1										5	20	27.1	3	49.1			
5284		40										15	20	5	10	30			
5285		40											15	25		40			
5286		40												40		40			
5287		40												40		40			
5288		40												40		40			
5289		64.8										8		56.8		64.8			
5290		38.9											20	18.9		38.9			
5291		40											20	20		40			
5292		50											20	30		50			
5293		40					35	5								40			Delet
5294		40				10	10	20								40			
5295		40				15	15	10							4	36			
5296		40				40									5	35			
		32518.7	731.2	405	1158.4	526	1159.	646.7	933	366	8177.7	697.9	1562.8	16055.0	845	31673.7			TOTAL RE

SOIL CLASSIFICATION.										Statutory Classification of LAND.		Merchantable Timber.		REMARKS.
NOT RECOMMENDED FOR AGRICULTURE.				RECOMMENDED FOR FOREST.										
CROWN LAND.				ALIENATED.		CROWN LAND.								
Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	First.	Second.	Acres.	M.B.M.	
1121.3	326	844	225.8	933	366	8177.7	629.9	1279.8	15362.3 92.7	781	29586.0 92.7 40 39.6 40			Deleted, now part of Lot 5731 " " " " " "
	25 5	15	35 40 20 10 39.6 15 40 40 40							10	30 40 40 40 40 39.6 40 40 40 40			" " " " " "
	10	10 30												" " " " " "
	5	20												" " " " " "
32.1	25	10	5							15	25 32.1 46.7 46.7 46.7 46 46 46 45 40			
								35 40 28 10 30 25	11.7 6.7 18.7 36 16 21					
	5 10	15 15	25 20							5	46 46 46 46 46 46 46 46 46			
	15	30	1.7					10	46 36		46 46 46.7 46.7 46.7 40			
5	25 10	10 30	5				5	5	11.7 41.7 35	5	35 40 38 45			
							25 10 5 15	25 25 20 20 15	16.7 27.1 5 25 40 40 40 56.8 18.9 20 20 30	3 10	51.7 49.1 30 40 40 40 64.8 38.9 40 50 40 40 36 35			
							8	20 20 20						Deleted, now part of Lot 5731
1158.4	10 15 40	35 10 15	5 20 10	933	366	8177.7	697.9	1862.8	16055.0	845	31673.7			TOTAL RECOMMENDED FOR AGRICULTURE.....ACRES; FOR FOREST.....ACRES.

LAND CLASSIFICATION OF

POWELL

PROVINCIAL FOREST

SOIL CLASSIFICATION.

Statutory
Classification
of
LAND.

Merchantable
Timber.

RECOMMENDED FOR AGRICULTURE.

RECOMMENDED FOR FOREST.

ALIENATED.

CROWN LAND.

ALIENATED.

CROWN LAND.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

1st Class.

2nd Class.

Forest.

First.

Second.

Acres.

M.B.M.

Carried fw'd.

32518.7

731.2

405

1158.4

526

1159

646.7

933

366

8177.7

697.9

1662.8

16055.0

845

31673.7

5297

40

40

5298

40

40

5299

40

30

10

5300

40

18

14

8

5301

40

5

10

25

5302

40

40

5369

229

117

90

22

5438

24

1

4

19

5439

39.2

5

34.2

5440

61.2

20

1.2

5441

79.4

10

29.4

10

30

5442

40

5

15

5443

50.2

30

20.2

5444

39.9

39.9

5445

78

4

20

54

5446

80

5

20

55

5447

160

20

140

5448

80

60

20

5449

160

5

155

5450

80

80

5451

40

15

5

10

10

5453

39.9

39.9

5454

40.9

10

15.9

15

5455

160

90

70

5456

112

20

56

5457

24.7

24.7

5458

160

10

30

120

5459

160

5

25

130

5460

128.6

10

118.6

5461

160

15

160

5462

160

20

145

5463

80

80

5464

78.4

20

35.6

20

58.4

5465

55.6

6

18

32.9

5466

56.9

78.4

5467

78.4

10

70

5468

80

10

150

5469

160

30

58

72

5470

160

3

5471

160

5

36

124

5472

75.1

8

45

25.1

5473

99.1

55

36.1

5474

84.9

10

84.9

5475

60.9

50.9

5476

160

20

160

5477

128

25

12

91

5478

128

25

20

63

5479

108

20

26

24.1

5480

70.1

36969.1

732.2

445

1303.5

763

1389

1150.4

1050

482

8253.3

744.9

2173.8

18482.0

945

36024.1

TOTAL RECOMMEN

Deleted -

SOIL CLASSIFICATION.

ENDED FOR AGRICULTURE.

RECOMMENDED FOR FOREST.

Statutory
Classification
of
LAND.

Merchantable
Timber.

REMARKS.

CROWN LAND.				ALIENATED.			CROWN LAND.			First.	Second.	Merchantable Timber.		
Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.			Acres.	M.B.M.	
1158.4	526 40 40 30 18	1159 10 14	646.7 8	933	366	8177.7	697.9	1662.8	16055.0	845 15 10 8 5 5	31673.7 25 30 32 35 35 40 229			
	5	10	25 40	117	90	22				2	22 39.2 61.2 79.4 40 50.2 39.9			
29.4 15 39.9		20 10 5 30	1.2 30 15 20.2						40					Deleted - now part of Lot 5732
							4 5	20 20 20 60 5	54 55 140 20 155 80	4	74 80 160 80 160 80 40 39.9 40.9 160			
5 39.9 15.9		10	10 15					90 20	70 56 24.7		112 24.7 160 155 128.6			
			36				10 5	30 25 10	120 130 118.6	5	160 155 128.6			
								15 20	160 145 80 58.4		160 160 80 78.4 55.6			
					20 6	35.6 18			32.9 78.4		56.9 78.4 80 160 157			
	30	58	72					10 10	70 150	3	160 157			
							5 8 10	36 45 55	124 25.1 36.1 84.9 50.9	8	160 75.1 91.1 84.9 60.9			
								20	160 108		160 128 118 98 55.1			
1303.5	763	1389	1150.4	1050	482	8253.3	744.9	2173.8	18482.0	945	36024.1			TOTAL RECOMMENDED FOR AGRICULTURE.....ACRES; FOR FOREST.....ACRES.

LAND CLASSIFICATION OF

POWELL

PROVINCIAL FOREST

Section or Lot Number.	Block No.	Total Acres.	SOIL CLASSIFICATION.												Statutory Classification of LAND.		Merchantable Timber.	
			RECOMMENDED FOR AGRICULTURE.						RECOMMENDED FOR FOREST.									
			ALIENATED.			CROWN LAND.			ALIENATED.			CROWN LAND.						
			1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	First.	Second.	Acres.	M.B.M.
Carried fw'd.		36969.1	732.2	445	1303.5	763	1389	1150.4	1050	482	8253.3	744.9	2173.8	18482.0	945	36024.1		
5481		90.2				45	35	10.2							25	65.2		
5482		51.4				15	15	21.4							5	46.4		
5483		80				8	50	22							5	75		
5484		80				32	33	15							10	70		
5485		152										8	12	132	3	149		
5486		74.6				3	10	61.6							3	71.6		
5487		80				5	30	45								80		
5488		76.1				5	20	51.1								76.1		
5492		81.5														81.5		
5493		44.2												81.5		81.5		
5494		159										5	15	44.2		44.2		
5495		80				25	25	30						139		159		
5496		80					29	51								80		
5497		80				20	25	35								80		
5498		80				2	78									80		
5499		54.2				48	4	2.2								80		
5500		92.3				24	68.3								33	21.2		
5501		89.8				15	10	64.8							10	82.3		
5502		59.2				14	20	25.2							8	81.8		
5503		121				10	100	11							4	55.2		
5504		80				4	76								5	116		
5505		80				40	28	12							4	76		
5506		73.7										12	20	41.7	16	64		
5507		80				36	15	29							24	73.7		
5508		80														56		
5509		80										10	8	80		80		
5510		205											15	62		80		
5511		155									155			190		205		
5512		156														155		
5513		79.9												156		156		
5514		238										25	25	79.9		79.9		
5515		91.1				60	25	6.1						188		238		
5516		91.1														91.1		
5517		91.1											71.1	20		91.1		
5518		83.3											20	71.1		91.1		
5519		90												83.3		83.3		
5520		91.1												90		90		
5541		146											68	23.1		91.1		
5697		85.9									85.9		10	136		146		
STL. 6502		426											49	377		85.9		
																426		
		41177.8	732.2	445	1303.5	1174	2085.3	1643.0	1050.0	482.0	8494.2	804.9	2486.9	20476.8	1100.0	40077.8		

TOTAL RECO

SOIL CLASSIFICATION.										Statutory Classification of LAND.		Merchantable Timber.		REMARKS.
DED FOR AGRICULTURE.			RECOMMENDED FOR FOREST.											
CROWN LAND.			ALIENATED.		CROWN LAND.									
Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	1st Class.	2nd Class.	Forest.	First.	Second.	Acres.	M.B.M.	
03.5	763	1389	1150.4	1050	482	8253.3	744.9	2173.8	18482.0	945	36024.1			
	45	35	10.2							25	65.2			
	15	15	21.4							5	46.4			
	8	50	22							5	75			
	32	33	15							10	70			
							8	12	132	3	149			
	3	10	61.6							3	71.6			
	5	30	45								80			
	5	20	51.1								76.1			
									81.5		81.5			
									44.2		44.2			
							5	15	139		159			
	25	25	30								80			
		29	51								80			
	20	25	35								80			
	2	78									80			
	48	4	2.2							33	21.2			
	24	68.3								10	82.3			
	15	10	64.8							8	81.8			
	14	20	25.2							4	55.2			
	10	100	11							5	116			
	4	76								4	76			
	40	28	12				12	20	41.7	16	64			
	36	15	29							24	73.7			
											56			
											80			
							10	8	62		80			
						155		15	190		205			
											155			
											156			
											79.9			
	60	25	6.1				25	25	188		238			
											91.1			
								71.1	20		91.1			
								20	71.1		91.1			
									83.3		83.3			
									90		90			
								68	23.1		91.1			
						85.9		10	135		146			
											85.9			
								49	377		426			
03.5	1174	2085.3	1643.0	1050.0	482.0	8494.2	804.9	2486.9	20476.8	1100.0	40077.8			
TOTAL RECOMMENDED FOR AGRICULTURE 7383.0 ACRES; FOR FOREST 33794.8 ACRES.														

Detailed boundaries of the Powell Forest

The detailed boundaries of the Powell Forest as recommended for gazetting are as follows:-

Commencing at the north-east corner of Lot 2358 the boundary runs west along the north boundary of the said Lot 2358 to the north-west corner of the same; thence westerly along the north boundary of Lot 4901 to the north-west corner of same; thence west to the north-west corner of Lot 4168; thence north to the north-east corner of Lot 4167; thence west to the north-west corner of said Lot 4167; thence north to the north-east corner of Lot 4163; thence westerly along the north boundary of said Lot 4163 to the south-east corner of Lot 4162; thence north to the north-east corner of said Lot 4162; thence west to the north-west corner of Lot 4161; thence north along the east boundary of I.R.No.1 (Sliammon) to the south boundary of Lot 846; thence east to the height of land between Sliammon and Powell Lakes; thence in a northerly direction to the south-west corner of Lot 3038; thence along the west boundary of said Lot 3038 to the north-west corner of the same; thence west to the height of land of the Powell Lake watershed; thence in a north-westerly direction along the height of land to a point due east of the south-east corner of Lot 2479; thence west to the said south-east corner of the said Lot 2479; thence north along the east boundary of Lot 2479 to a small lake; thence around the west side of said lake to a point on the east boundary of Lot 2480; thence north to the north-east corner of Lot 2481; thence west to the north-west corner of the said Lot 2481; thence north 2 miles more or less to a point due west of the south-west corner of Lot 3488; thence east to the south-east corner of the said Lot 3488; thence north to the north-east corner of the same; thence east to the south-east corner of Lot 2640; thence north to the north-east corner of the said Lot 2640; thence east to the south-east corner of Lot 1272; thence following the south and east boundaries of Lot 1584 to the most easterly north-east corner of the said Lot 1584; thence north to the most westerly south-west corner of sub-lot 2 of Lot 1527; thence along the south boundary of the said sub-lot 2 to the west boundary of Lot 521; thence south along the said west boundary of the said Lot 521 to the south-west corner of the same; thence east to the shore of Powell Lake; thence along the shore in a northerly and easterly direction to the east boundary of Lot 4719; thence north along the said east boundary to the north-east corner of the said Lot 4719; thence west to the north-west corner of the same; thence north to the north-east corner of sub-lot 1 of Lot 1527; thence west to the north-west corner of the said sub-lot 1; thence north to the north-east corner of sub-lot 3 of Lot 1527; thence west to the south-east corner of sub-lot 6 of Lot 1527; thence north to the north-east corner of sub-lot 7 of Lot 1527; thence west to

the south-east corner of sub-lot 8 of Lot 1527; thence north to the north-east corner of the said sub-lot 8; thence west to the south-east corner of sub-lot 9 of Lot 1527; thence north to the north-east corner of sub-lot 10 of Lot 1527; thence north one mile; thence east four miles; thence north approximately $6\frac{1}{4}$ miles to the south boundary of Lot 438; thence west to the most southerly south-west corner of the said Lot 438; thence north one mile; thence west approximately $1\frac{1}{2}$ miles; thence north to the most westerly south-west corner of Lot 438; thence north one mile; thence west half a mile; thence north 3 miles; thence east $1\frac{1}{2}$ miles; thence north 4 miles; thence east 5 miles; thence south $1\frac{1}{2}$ miles; thence east 2 miles; thence south 1 mile; thence east $5\frac{1}{2}$ miles; thence south 2 miles; thence west 5 miles; thence south 4 miles; thence east $3\frac{1}{2}$ miles; thence south 4 miles; thence east 4 miles; thence south 6 miles; thence west 2 miles; thence south 9 miles; thence east 4 miles; thence south $2\frac{1}{2}$ miles to a point due west of the north-west corner of S.T.L. 13296; thence east approximately 1 mile to the said north-west corner of the said S.T.L. 13296; thence east to the shore of a small lake; thence around the north shore of the said lake to the south boundary of Lot 1908; thence east to the south-east corner of the said Lot 1908; thence in a southerly direction along the height of land between Hotham Sound and Prince of Wales Reach to the most westerly north-west corner of S.T.L. 7569; thence along the west boundary of the said S.T.L. 7569 to the most southerly south-west corner of same; thence in an easterly and southerly direction along the height of land of the said watershed between Hotham Sound and Prince of Wales Reach to the shore of Prince of Wales Reach near Dacres Point; thence following the shore of Jervis Inlet via the shore of Hotham Sound in a southerly and westerly direction to the south-east corner of Lot 2091; thence north to the north-east corner of the said Lot 2091; thence west to the north-west corner of the same; thence south to the shore of Jervis Inlet; thence in a westerly direction along the said shore to the south-east corner of Lot 4121; thence north to the north-east corner of the said Lot 4121; thence west to the north-west corner of Lot 1630; thence south to the shore of Jervis Inlet; thence in a westerly direction along the said shore to the south-west corner of Lot 2558; thence north to the north boundary of Lot 3836; thence westerly along the north boundary of same to the eastern boundary of Lot 3504; thence west to the east boundary of Lot 3835; thence south to the south-east corner of the said Lot 3835; thence west to the north-west corner of Lot 3505; thence north to the north-east corner of Lot 2676; thence west to the north-west corner of Lot 4422; thence north to the north-east corner of Lot 4420; thence west to the east boundary of Lot 4418; thence south to the south-east corner of the said Lot 4418; thence west to the west side of Lois River; thence in a northerly

direction along the west side of the said Lois River to the north boundary of Lot 4409; thence west to the north-west corner of Lot 4411; thence north to the north-east corner of Lot 4415; thence north approximately 50 chains; thence west approximately 60 chains to the north east corner of Lot 5292; thence north 45 chains; thence west 60 chains; thence north approximately 40 chains; thence west approximately 75 chains to the east boundary of Lot 5502; thence north along the said boundary to the north-east corner of Lot 5502; thence north to the north-east corner of Lot 5501; thence east approximately 40 chains; thence north approximately 80 chains to a point due east of the north-east corner of Lot 5477; thence west approximately 40 chains to said corner; thence south to the south-east corner of Lot 5477; thence west to the south-west corner of Lot 5476; thence north to the south-east corner of Lot 5474; thence west to Lang Creek; thence in a north-westerly direction along Lang Creek and the west boundary of Lot 5474 to the north-west corner of said Lot 5474; thence west to the south-west corner of Lot 5462; thence north to the north-west corner of Lot 5456; thence north approximately 50 chains to the south boundary of Lot 915; thence east to Haslam Lake; thence along the shore of said lake in a general northerly, westerly and north-easterly direction to the east boundary of Lot 5438; thence north to the north-east corner of the said Lot 5438; thence west to the north-west corner of Lot 5439; thence south to the south-west corner of the said Lot 5439; thence west and south along the north and west boundaries of Lot 5451 to the south-west corner of the same; thence west to the north-west corner of Lot 5453; thence following the north-east boundary of Lot 4614 to the north-east corner of Lot 5200; thence west to the south-east corner of Lot 4613; thence following the north-east boundary to the north-east corner of Lot 4067; thence west to the shore of Powell Lake; thence following the shore of Powell Lake in a westerly and northerly direction to the point of commencement, i.e. the north-east corner of Lot 2358.

One block, excluded from the forest area, lies wholly within the forest boundaries. The detailed boundaries of this block are as follows:- Commencing at the south-west corner of Lot 4728 the boundary runs north to the north-west corner of the said Lot 4728; thence west to the south-west corner of Lot 4727; thence north and east along the west and north boundaries of the said Lot 4727 to the north-east corner of the same; thence north to the north-west corner of Lot 4726; thence east to the north-east corner of Lot 4725; thence south to the north-west corner of Lot 4724; thence east, south and west along the north, east and south boundaries of the said Lot 4724 to the south-west corner of the same; thence south to the shore of Giovanni Lake; thence in a westerly and southerly direction along the shore of the said Giovanni Lake to the south boundary of Lot 4728; thence west to the point of commencement.

APPENDIX III

Volume tables and yield tables used:

The volume tables used were made by J.L. Alexander in 1924 from data obtained in a large number of logging operations typical of all coast conditions. These tables are total height tables divided into three site classes, i.e. short, medium, and tall. The tables were available for fir, cedar and hemlock only. For other species the old log-length tables, also compiled by Alexander, were used.

No yield tables were available but estimates typical of average coast conditions and also compiled by Alexander were used. These estimates appear on page. 11. under "management recommendations".

Method of survey:

Field methods of the survey were based on the instructions for forest surveys issued in 1928.

Cost of survey:

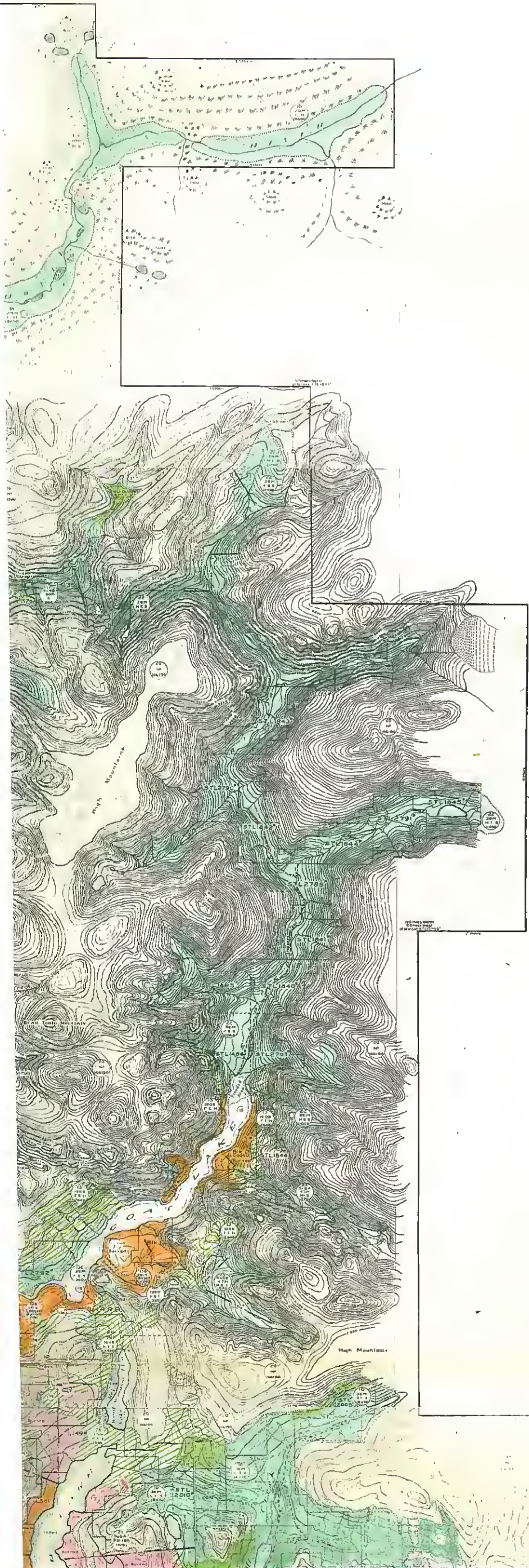
Total ^{net} acreage examined for forest cover	= 210,200 acs.
Total " " for land classification	= 40,935 "
Cost of survey applied for forest cover	
work	= \$2,932.57
Cost of survey applied to land classi-	
fication	= 1,901.75
Total cost of survey	<u>\$4,832.32</u>

Cost per acre of forest cover examination	= \$.014
" " " " land classification	= .046

Base maps:

The base maps of the Powell Forest were made from Lands Department Reference Maps # 5 and #6. These maps were enlarged to the required scale of 40 chains to the inch. Topography and forest types were obtained for the majority of the alienated timber licences from private sources. Private triangulation and flood level maps were used for the locating of strips and plotting of proposed flood level contours.

cost per acre based on gross area of forest 1009



THE POWELL FOREST 1930

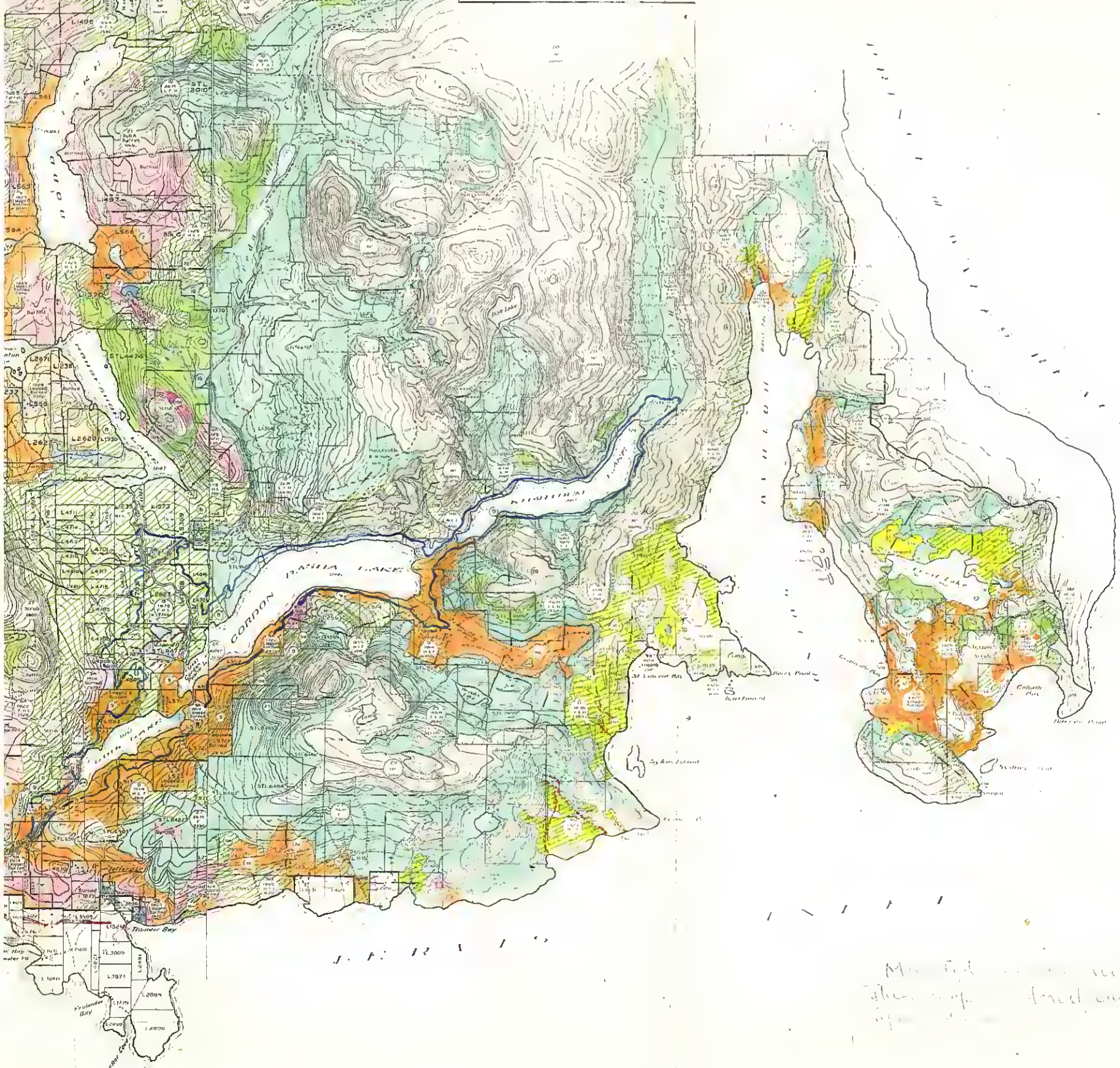
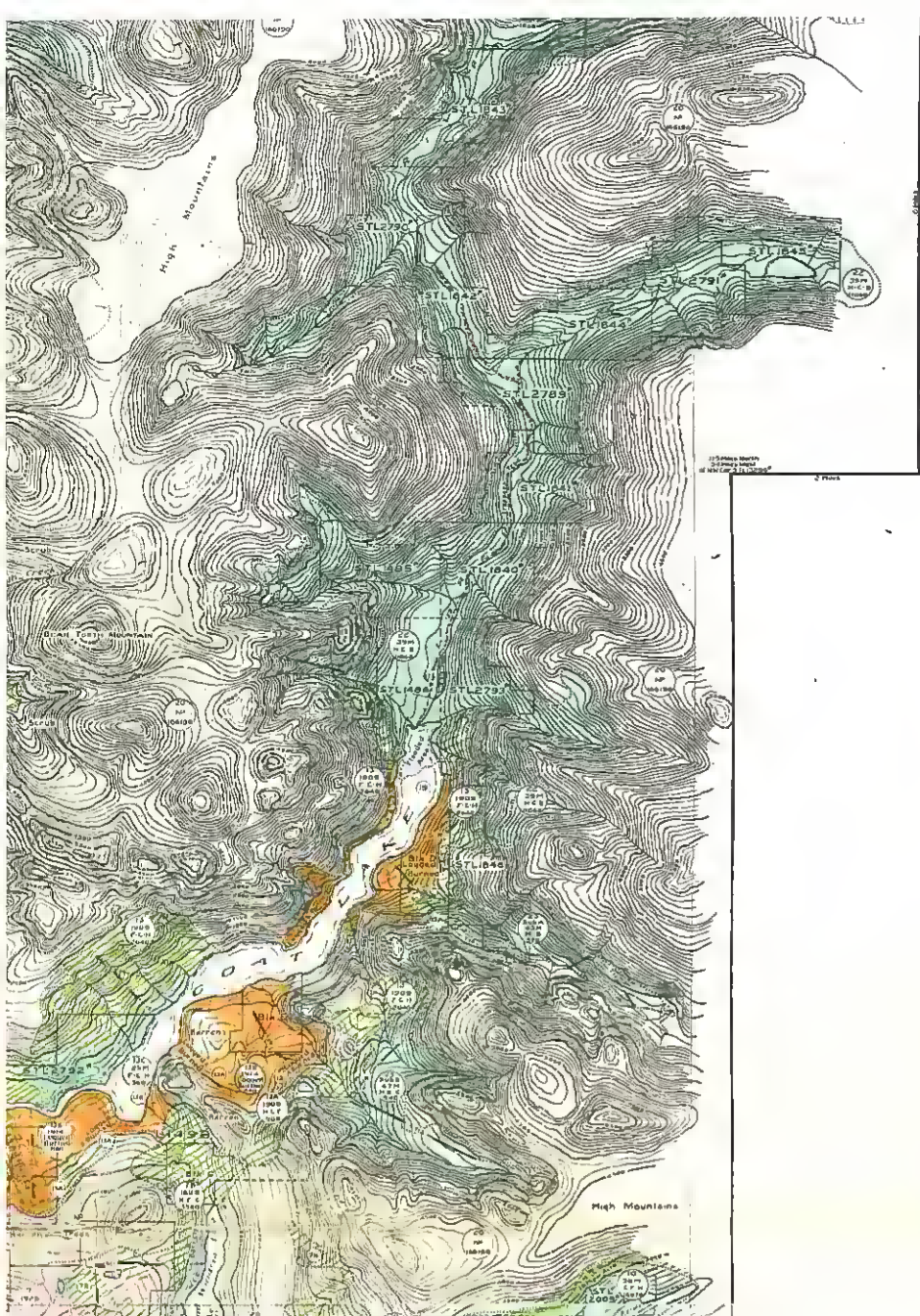
FOREST SURVEYS DIVISION
B.C. FOREST SERVICE

Scale 2 miles to 1 inch

J.D. Kukkonen
Forester

REFERENCE

- Mature Timber
- 2011BM and over per acre
- Under 2011BM per acre
- Immature
- Burn not restocking
- Logged and burned
- Logged
- Non commercial forest
- Non productive
- Grazing
- Swamp
- Proposed flood level
- Revision of preliminary bounds as recommended for gazetting

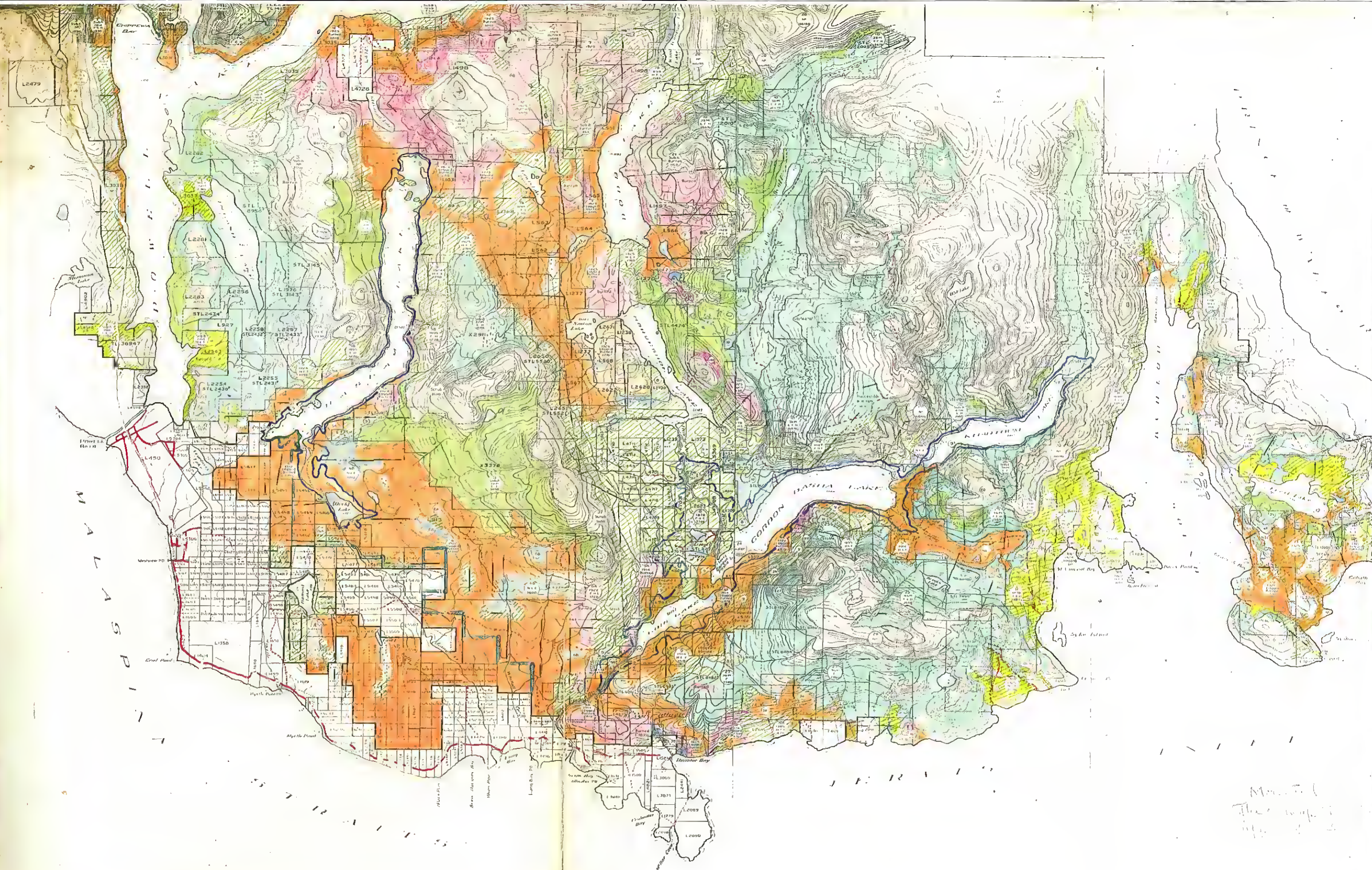


REFERENCE

- Mature Timber
- 20.1BM and over per acre
- Under 20.1BM per acre
- Immature
- Burn not restocking
- Logged and burned
- Logged
- Non commercial
- Non productive
- Crozing
- Swamp
- Proposed flood level
- Revision of preliminary boundary as recommended for gazetting





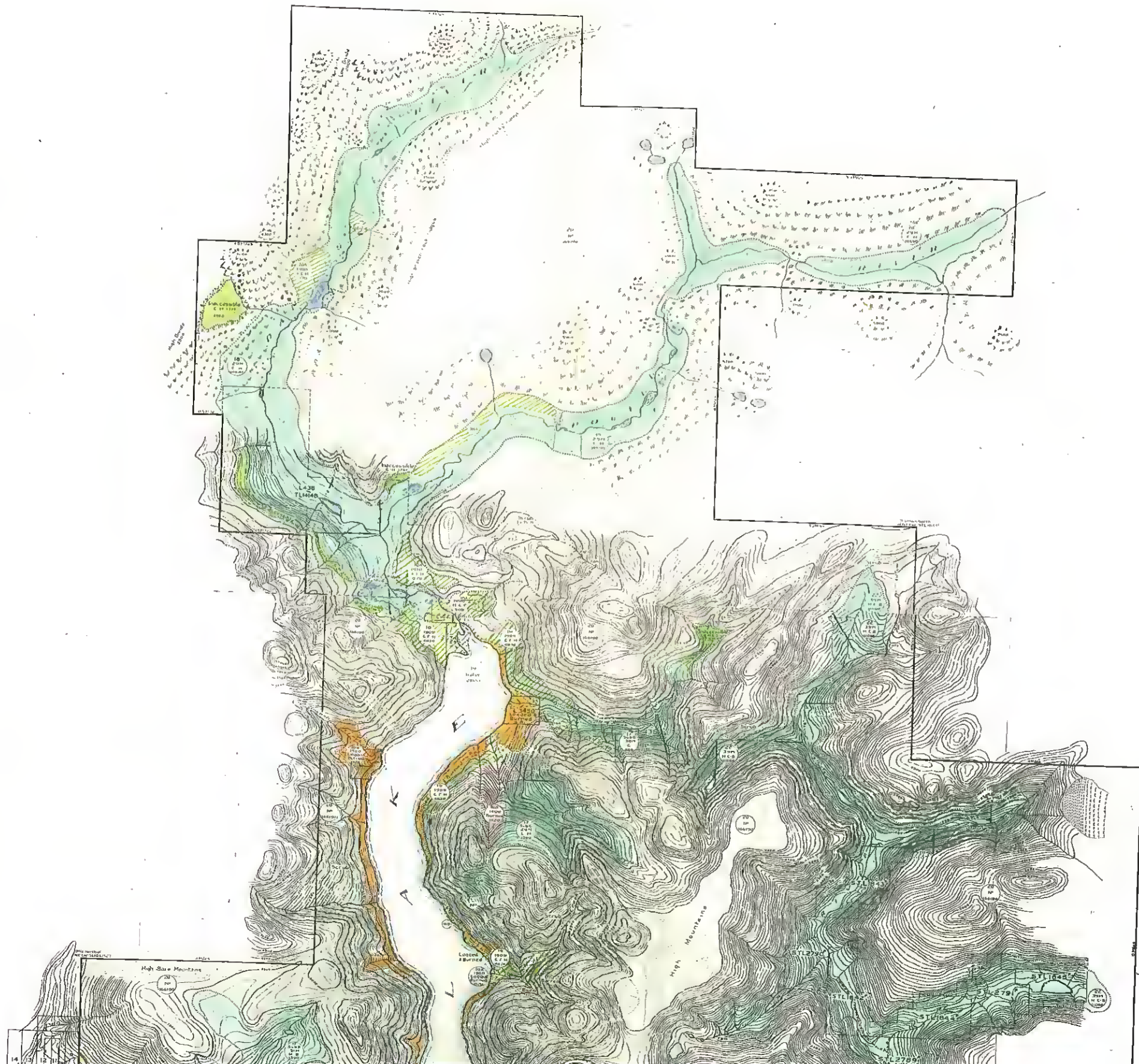
Map of the region of the St. Lawrence River and Lake Ontario, showing the proposed flood level and the revision of the preliminary boundary as recommended for gazetting.



J. D. Kulkarni
Forester

Mature Timber
20MBM and over per acre
Under 20MBM per acre
Immature
burn not restocking
Logged and burned
Logged
Non commercial
Non productive
Grazing
Swamp

Proposed flood level: 
Revision of preliminary boundaries
as recommended for gazetting 



THE
POWELL FOREST
1930

FOREST SURVEYS DIVISION
B.C. FOREST SERVICE

Scale 2 miles to 1 inch

J.D. Mulholland
Forester

REFERENCE
Mature Timber